

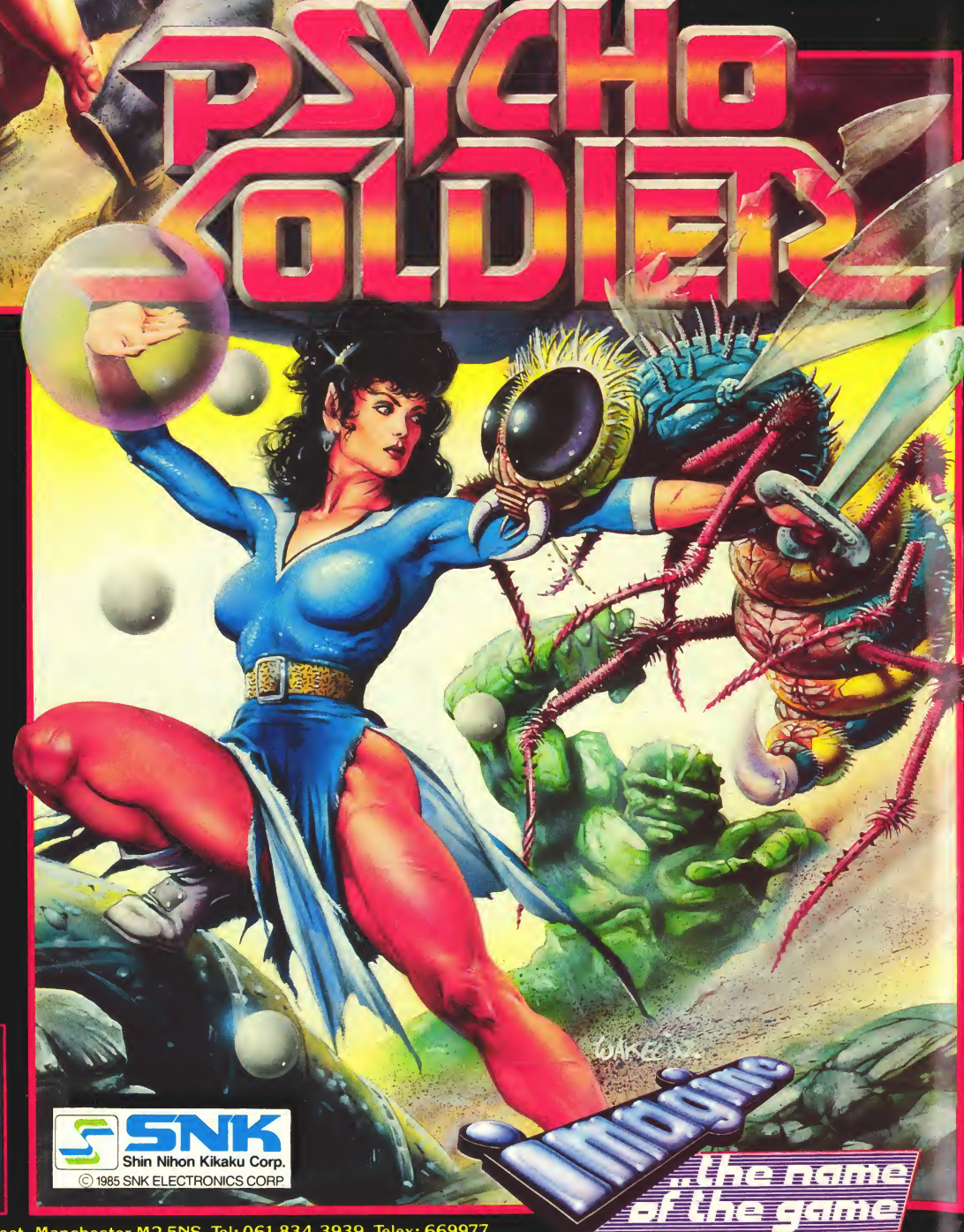
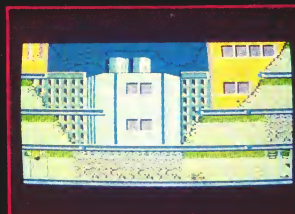
FROM THE ARCADES-A TIGRESS!



Her mission, to enter the last world and slay its evil guardian, but the last world is seven worlds away on a long and dangerous journey through the worlds of forest, cavern, sky, sea, labyrinth and hell, each having its own formidable guardian which must be overpowered and slain. Collect armour and weapons but beware the energy sapping poison for which only a secret medicine is the cure. Superlative graphics and arcade style action game play add up to a great package for the coin-op kings.
SPECTRUM £7.95 COMMODORE £8.95
AMSTRAD £8.95



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SPECTRUM £7.95
COMMODORE £8.95
AMSTRAD £8.95



SNK
Shin Nihon Kikaku Corp.
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The name of the game

Atari ST
Amiga
CBM 64/128
Spectrum
Amstrad
+ more

ACE

ADVANCED • COMPUTER • ENTERTAINMENT

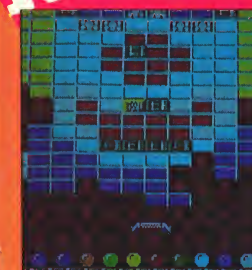
Digipaint
Vs.
Deluxe
Paint II

The ultimate
paintboxers

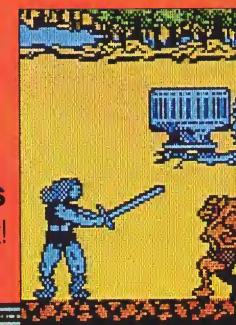


**ACE
RATED**

Terrorpods
- Tripod trouble
from Psygnosis



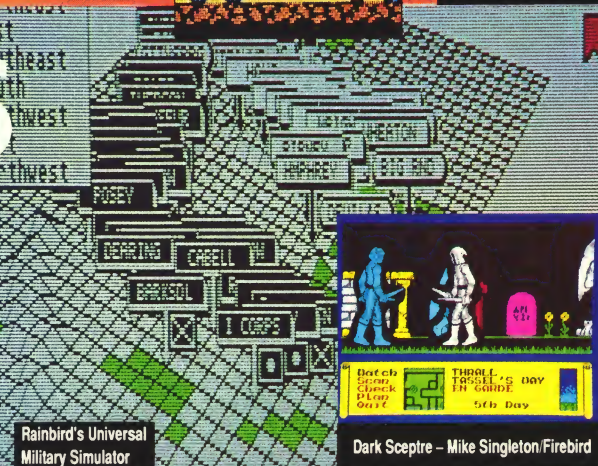
Addictaball
- another clone
breaks out



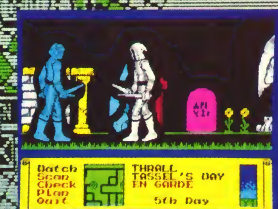
Thundercats
- Elite on heat!

Buyers'
Guide:
We
pick 15
games
that
fight
back.

strategy



Rainbird's Universal
Military Simulator



Dark Sceptre - Mike Singleton/Firebird

See how
they run

ATARIST
ARCHIMEDES
AMIGA



Where to
place your bet
in the upgrade stakes.

Grab that
sound!

We sample
the samplers



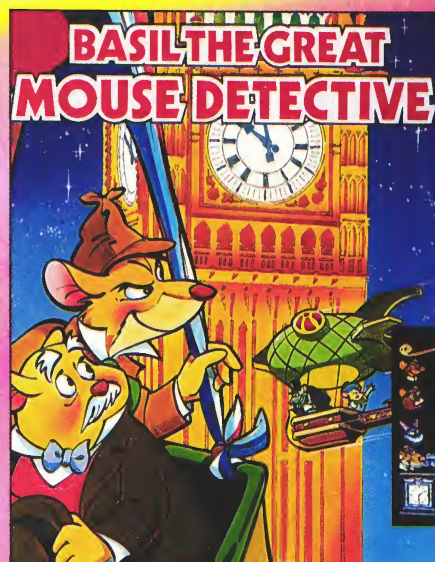
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GREMLIN

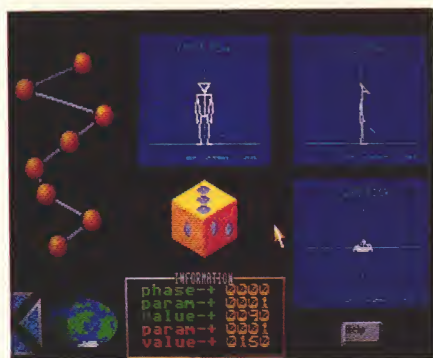
INTERFACE

7 News

The first **millionaire programmer**? New **video standards**? Get your ear to the ground and catch the **latest whispers** from the world of computer entertainment.

14 Previews

Our technicolour crystal ball checks out the stunning 16-bit **Eco** from Ocean plus Ariola-soft's **Werewolves of London**, Rainbird's **Carrier Command**, and many more.



Eco-evolutionary game

23 Letters

Praise, protest, passion... We give you the space, you give us the punchlines.

122 The Blitter End

Just when you thought it was safe to put down the magazine...plus news of the **ACE Christmas Cracker**.

SPECIALS

38 The Upgrade Stakes

Check out **all** the facts before placing your bets in the Atari/Amiga/Archimedes **steeplechase** – otherwise you could end up a **loser**.



ACE 3

20 Great Computer Disasters

Forget the usual **blather** about micro awards – this is one ceremony which the winners definitely **won't be attending**.

85 Of Strategic Importance

Fifteen games that **fight back** featured in our Strategy Buyer's Guide, plus previews of Rainbird's **Universal Military Simulator** and Mike Singleton's **Dark Sceptre**.



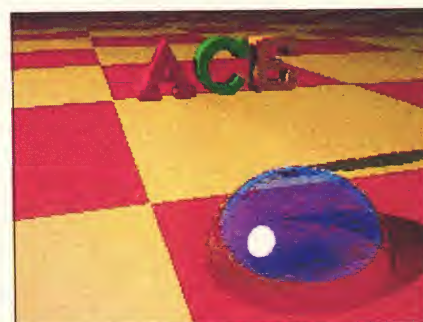
SIGHT...

45 Pictures at an Exhibition

Stunning Amiga arrivals at the PCW Show – but watch out for **4096** colours on your Atari ST.

47 Paint Boxing

Digipaint and **Deluxe Paint II**. In fierce competition? Or just good friends?



ACE makes the most of Digipaint and Deluxe Paint 2

...AND SOUND

31 Sampling Safari

Forget the **beeps and squeaks** of your micro's sound chip – sampling enables you to capture real-life sounds from the big bad world. Mark Jenkins shows you how to pack **barks** into **bytes**.

36 One Man Band

Roland's **MT32** gives you a whole orchestra to play around with. Michael Downey investigates.

GAMEPLAY

51 Screen Test

The **Christmas assault** on your wallet is hotting up. Check out our 22 page guide to the **latest contenders**.



Moggy mayhem from Elite

28 Arcade Ace

Afterburner and **Skywolf** – how do these uprights **stand up** to the ACE treatment?



Afterburner: hot stuff

82 Updates

Latest format conversions, including **Super Sprint** for the C64; **Gunship** for the PC; and **F15 Strike Eagle** for the ST.

102 Postal Orders

ACE puts its stamp on **Play-By-Mail** games. Find out how 18p can lead to the conquest of another galaxy.

107 Tricks 'n' Tactics

Make this your **highest scoring month** yet with our six-page guide to **Red LED**, **Skulldiggery**, **Boulderdash**, **Dizzy**, and many more.



The slippery slope to success...Find out how the programmers do it in Red LED.

93 Adventures

Gnome Ranger presents Ingrid Bottomlow. Or is it the other way round? Plus **Yes**, **Prime Minister**, and a peek at **Jinxter** from Magnetic Scrolls.

BUY LINES

120 Special Offers

We must be **mad** to offer you up to **£4 discount** on these games. Get your order in before the **men in white coats** arrive to take us away...

119 Subscription Offer

Join the elite band of readers who are **gloating** over a year's subscription to ACE and an extra **£10** off those amazing mail-order bargains.

COMPETITION

26 Emergency eye treatment

You've seen the competition on the cover and you can't believe your eyes. Don't panic. Do not adjust your set. Just grab a pen and go for it.

Now we are three...

School Report

Pupil: ACE Magazine

News: Good to see young ACE broadening its coverage to include **important issues** of concern to games players, and not just new releases. Am **shocked** to read how much these programmers earn. Must apply for a rise...

Specials: Excellent coverage, but cannot agree with the **Upgrades** article – still maintain that my MSX3 machine is **yonks better** than Amiga or ST.

New Sections: New dedicated sections for **music** and **graphics**?? Cannot remember authorising this **shocking extravagance**. See me behind the gym tomorrow morning. (PS Bring copy of *Star Trek* with you).

Strategy Buyers' Guide: Rubbish. If *Space Invaders* was good enough for me, it's good enough for the readers. The only strategy around here is a swift, sharp stroke of the **birch**. See me behind the gym tomorrow morning. (PS Bring an ST to run it on as well).

Games: Very distressed about this. I thought I had made it quite clear that at least 90% of the coverage should be devoted to educational software for the under 5's. Bitterly resent inclusion of **colour preview pages**, **play-by-mail**, and complete waste of six colour pages on **tricks'n'tactics**. See me behind the gym tomorrow morning. (PS Bring colour monitor while you're about it).

Great Computing Disasters: At last! A **serious** article, despite wicked slur on reputation of **Oric Atmos** – an **excellent machine** which I had the good fortune to purchase. Still play *PacPerson* on it every evening. (Note: How about including the Oric in the Release Boxes?).

Never!

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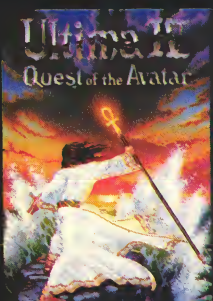
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Warriors of Destiny



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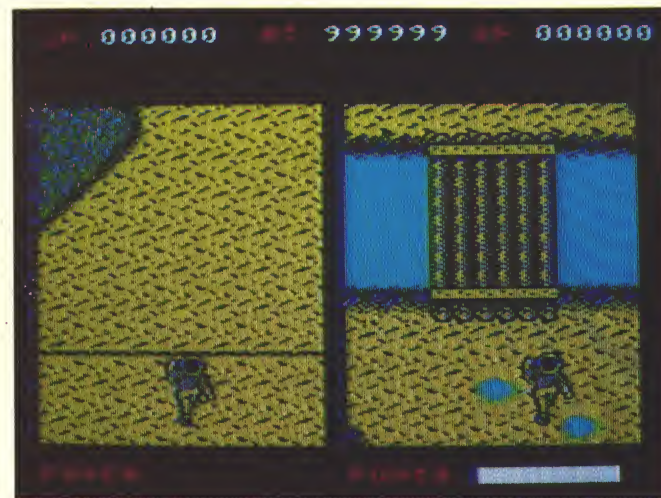
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Multi-load mania



Combat School (Amstrad): take walls in your stride.

Even 8-bit machine owners are beginning to benefit from the sudden growth in the 16-bit software market, though the advantages may be offset by increased loading times. Realising that the market is being bombarded by disc-based 16-bit programs featuring snazzy graphics and extended gameplay, 8-bit programmers are hitting back in the only way they can – multi-load games.

Check out *Indiana Jones* from US Gold (reviewed this issue), *Road Runner*, Infogrames' *Passengers on the Wind* and others released to date, but the real evi-

dence that multi-load may soon be standard for full-price releases comes from Ocean, who are putting their weight behind extended 8-bit software with this year's big winter releases.

The impressive graphics of *Game Over* and *Renegade* were too bulky to fit into a low-memory 8-bit machine in one go, and Ocean's new titles continue this trend: three big coin-op conversions – *Combat School*, *Gryzor* and *Rastan's Saga* – and the film tie-in *Platoon* will all load in several separate stages on the C64, 48K Spectrum and Amstrad 464/664. For people with disk drives or 128K Spectrums this doesn't pose too much of a problem, but the rest of you will just have to put up with mid-game loading delays. "You just can't do justice to games like *Gryzor* or *Combat School* without multiloading", explained software manager Gary Bracey. "It's the only way to get the graphics and the game size."

There's another slant to the multi-load game that's worth bearing in mind. Competition between budget labels and full-price companies has been hotting up in the last few months, with the latter constantly being called upon to justify their higher prices. Given the economics of budget companies, multi-load is a province that could remain the prerogative of the full-price merchants and add value to their products without necessarily adding too much in the way of programming costs.



Gryzor (Spectrum): blast the security panels to knock out that forcefield.



Gryzor (Amstrad): wreck the defence computer before... too late! It got you first.

ACE NEWS

Mastertronic empire building

Mastertronic are getting their hands on some hot properties these days – not content with the Sega machine, Melbourne House, and Arcadia, the company will now be producing the 8-bit versions of Psygnosis games.

If you've got a Spectrum, Amstrad or C64, therefore, and have been drooling over 16-bit titles like *Deep Space*, *Barbarian* (not the Maria Whittaker one) or *Terrorpods*, then drool no more: the 8-bit conversions are due real soon now. The games will carry the name Psygnosis, but this is largely a matter of 'badge engineering' since they will be written, packaged and marketed by the budget goliaths.

Meanwhile, on the talent-snatching front, Arcadia have managed to pick up veteran programmers Andy Walker and Paul Hodg-

son – the duo behind defunct C64 software house TaskSet of *Super Pipeline* fame. With their first title for the system, *Road Wars*, their programming careers come full circle: in pre-TaskSet days they wrote coin-op games, back when that normally meant *Frogger* or *Centipede* clones.

Walker described working for the arcades again as 'tremendous', and said of the Amiga-ish console 'It's not an ideal piece of hardware – it only really has eight sprites, for example – but there's a lot to be thankful for. The Amiga is definitely a games machine at heart even if Commodore don't want to present it as such. I'm well pleased that there's a good future for the machine now, after the rough patch it went through.'



Psygnosis snarl-em-up Barbarian on the ST: will Mastertronic's 8-bit versions come up to scratch?



Walker & Hodgson's Road Wars, the first Arcadia title – out on home micros soon, too!

PROGRAMMERS – RICH & FAMOUS?



David Braben – 100000 good reasons for that contented grin.

You too can make a fortune working from home! Turn your hobby into a profitable pastime! Yes, writing computer games can make you rich and famous!

Well, can it? Hundreds, if not thousands, of people are hard at work coding games in this country, but how many of them make a decent living? How many are rich? And how many are seeing little or no return for their labours?

Let's start with one of those success stories that first of all warms the very cockles of your heart and then sets you to thinking you could do that too – David Braben. He's 23, and for the past two years has earned £100,000.

Darling Code Masters

Programming might be one way to earn a living, but if you want to make a real fortune wouldn't you be better of starting your own software house? That's what Richard and David Darling did with Code Masters – and haven't they done well? The software wunderkind started off programming for Mastertronic. In the space of two years they wrote 20 games and, estimates David Darling, made around £100,000. Their own budget label rapidly acquired a reputation for quality

From – yes, you guessed – *Elite*. How did he do it? David's an unassuming type of chap; he just reckons he was 'in the right place at the right time', although he does think his science background (he's a Cambridge man) has made him 'more familiar with the maths needed for 3D programs.'

One reason why David Braben might have got a slightly better deal than some other programmers – apart from writing a superb game, of course – is that his business interests are handled by an agent. Along with 30 or so more of the UK's top programmers David Braben is 'handled' by Jacqui Lyons of the the Marjacq Agency; she negotiates

contracts and places any original games her clients come up with.

The advantages for the programmer are clear; you just get on with the job while a toughish cookie with years of deal-making experience sorts out the financial and contractual side (for a percentage, naturally). Jacqui Lyons is, of course, pretty reticent about what her indi-

are; but what if you're just a lone-some figure running your own freelance life? The worries here are threefold; that you just can't get your act together, that you don't get a good price for the job or even that you get ripped off when you've done it. The last of these happens much more rarely now than a few years ago; but there are still sad cases of

The Professionals

What have the good programmers got that the others haven't? Jacqui Lyons of Marjacq has forthright views on the kind of people she'll take on board: 'They must be machine code programmers. They must understand what it means to be professional in the market. We do not deal with amateurs.' What she means is knowing what you're doing and then doing it – properly and on time. So if you can't get your act together – forget it.

The kind of people who have got their act together and are signed up as clients include the aforementioned David Braben, the Electric Pencil Co. (of *Zoids* and *Fourth Protocol* fame) and Argonaut Software (of *Starblazer*).

viduals or teams earn, but she did say that £6-7.5K would be a reasonable fee for a game conversion from Z80 to 6502 by a programmer with a good reputation. She also added that Marjacq clients could expect to earn 'a good professional salary – in excess of £20,000 a year.'

That's Marjacq clients – see the box for what kind of people they

programmers being taken for a ride.

Nigel Brooks of newish development house Smart Egg thinks the best way to start off is by making a little money from your hobby – a budget game put out on one of the myriad small labels might net you £1000. It doesn't sound much, but when you consider that out of the £1.99 retail price the programmer gets around 10-13p it's a lot of copies to sell. Things change if you have a budget bestseller – 50 Mastertronic games are reputed to have sold in excess of 100,000 copies – but then we're talking about something a bit special.

The professional programmer's life, says Nigel, is 'very, very hard work. A game doesn't sell itself. You've got to go around the publishers selling yourself and your work.' Unless you're prepared to put that kind of effort in, you're unlikely to make that £20K salary that seems to be the point where you cease to be an amateur and start to be a pro.



David and Richard – Darlings of the budget industry.

games, and is now worth, David reckons, over a million pounds. And business is still boom; the

recently released Spectrum version of *Grand Prix Simulator* sold 12,000 copies – on its first day.

Tough Talkin' Arcana

Making bold claims about the quality of your software before it actually hits the shops is one way of setting yourself up to be hoist with your own petard. But it doesn't bother Bristol-based software house Arcana; they're claiming that their imminent Amiga and ST release *Mars Cops* 'is destined to set the standard for 16-bit software that others will have to meet.'

Them's fightin' words, boys – but if the game plays as well as this preview screenshot looks they might just have a point. *Mars*

Cops is a 3-phase space shoot-em-up which involves you in chasing UFOs through space and down trenches before a *Lunar Landing*

style sequence rounds it off. No, the scenario isn't exactly original, but who cares? If the action's as slick and exciting as promised it could be one to watch. There should be a review in your next issue of ACE.

Also coming soon from Arcana are the 16-bit versions of *Powerplay*. This is a quiz-cum-strategy game, originally released to good reviews on Amstrad and C64 about a year ago. Arcana say the game has been souped up considerably in terms of graphics and number of questions.



Mars Cops – that's you in the green ship, flitting over Mars.

Don't forget your LipStik

If you thought November's piece was the last you'd hear for a while on the subject of joysticks, you'd be wrong. Adverts are now appearing in US mags for yet another 'revolutionary' game control gizmo – the LipStik Plus, a 'voice-activated control headset'. The headset with mouthpiece acts as 'another fire button'; you shout 'Fire!', or 'Die slimy aliens!', or whatever takes your fancy instead of hitting the trigger.

The manufacturers, Access Software, claim that it works with 95% of games that use a joystick and with machines including C64, Amiga, Atari ST and IBM PC. In the States it's sold at \$24.95 or \$29.95. US Gold will be distributing the

LipStik over here from next spring, but as yet there's no word on the likely price.

Access Software are promoting the LipStik by including it with their game *Echelon*, a flight sim based on the Lockheed C-104 Tomahawk fighter; that too will touch down here from US Gold next year.



All-American boy wearing LipStik.

Upgrading your TV...

Let's face it, there are times when the creepy-crawly, fuzzy image on your telly just doesn't do justice to your latest copy of Multi-Colour Mutant Midgets. Shelling out on the latest hi-res colour monitor will solve the problem, but it will probably bankrupt you as well. What's the solution?

The answer at the moment is a visit to the optician, but take heart because just round the corner lies a revolution in TV display standards. Sony have developed a high-definition video standard that uses a display of 1125 lines, instead of the normal 625 lines on yer average British telly. The screen display is 5:4 ratio, which gives it a cinema-type display format as opposed to the normal squat, square ratio of standard TVs.

The quality is so good that although the system has yet to be adopted by the world's soap corporations, the film business has already started to use it for shooting movies. Rather than film your next block-buster on expensive celluloid, you can now use the Sony system to film on video, edit it far more cheaply, and then transfer the results to film for the cinemas. *Julie Julia*, starring Sting and Kathleen Turner, used this system and is now on general release in the States.

Implementing the system on a national basis is going to present problems, since we're talking about a completely new approach to TV broadcasting that demands more than a simple upgrade of existing equipment. There's little doubt, however, that the system, or an equivalent, will eventually be adopted, though it may take one of the new independent organisations to take the leap first.

Meanwhile, you can try out ED-Beta, another Sony development that gives twice the resolution of normal video tape recorders and rock-steady freeze frames – should be available here in the New Year. Or the XVT600, pictured here, which uses the MSX standard as the heart of a scanner/editor, allowing you to scan images and edit them on a 15 colour, 320x200 pixel display. If you can afford the £600 for it, however, you can probably afford a decent hi-res monitor, so perhaps better to wait for the new TV standard after all.



Sony's XVT600 – MSX in wolf's clothing

Snippets...

Captain Courageous English software.

C64 £8.95 cs £12.95 dk



Blasting jungle combat game – survive sniper and crocodile attacks and race for the helicopter. Imminent release expected.

The Stratton Air Terminal CRL

C64 £9.95 £14.99 dk

A fully computer controlled air terminal has been hit by terrorists and is in a shambles. Due out in this month, the player must de-activate the central computer and release the trapped passengers.

Night Raider Gremlin

C64 £9.99 cs £14.99 dk

Atari ST £19.99 dk

Combining flight sim with shoot-em-up, your objective is to sink the Bismarck, dodge the flak and return safely. Spectrum and Amstrad versions are due in the new year.

He-Man Gremlin

C64/128 £9.99 cs £14.99 dk
Spectrum £7.99 cs Amstrad £9.99 cs £14.99 dk

Join He-Man in this good versus evil arcade adventure. Gremlin try to recreate the forthcoming feature film for the benefit of home micro owners. Due mid-December.

Gary Lineker's Superstar Soccer Gremlin

Spectrum £7.99 cs Amstrad £9.99 cs £14.99 dk C64/128 £9.99 cs £14.99 dk Atari ST £19.99 dk

A footballing sim that tests the players management, coaching and goal scoring abilities. Imminent release expected – could even be out as you read this.

Terramex! Quicksilver

Play the part of Albert Eyestrain in this action packed arcade adventure game that is awash with tortuous puzzles. Avoid the dive bombing Pteradactyls and dodge the acid rain. Price unknown but should be available in January for Atari ST, Amiga, Spectrum, Commodore and Amstrad.

Power Pyramids Quicksilver

Spectrum £7.99 cs

Send your spheroid through 128 screens of arcade adventure where you don't move the ball but move the landscape instead. Dash across the space – time continuum for a few light years, deliver your goods and get your docket signed before you return to pick up your pay cheque. Expect to get your hands

Electric Dreams throttle up....

The sequel to Sega's *Hang-on* coin-op has been licensed to Electric Dreams for the conversion to home micro. Four different courses, four skill levels and conversions for 8 bit micros are well under way with the Spectrum version likely to be the first, swiftly followed by C64 and Amstrad. Prices around £9.99 for cassette versions and £14.99 for Commodore and Amstrad disks. There are plans for 16 bit versions but these are a while off yet.

Not content with the one coin-op conversion, Electric Dreams are also converting the Data East games *Fire Trap* and *Karnov*, due to appear in early '88 with price tags off £9.99 and £14.99 for cassette and disks respectively.



Hanging on in Super Hang-On



CHUCK YEAGER'S ADVANCED FLIGHT TRAINER

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ELECTRONIC ARTS

Infocom shorts out

Infocom's latest release, *Nord and Bert Couldn't Make Head or Tail of It* must be an all-time adventure first. Instead of the usual adventure scenario, they've come up with a series of eight short stories on one disk.

There are eight scenarios involved, and you can move at will between seven of these. To play the eighth, however, you need seven passwords, gathered by successfully completing the other sections.

There are, however, even more shocks for the hardened adventurer. Instead of solving puzzles based around using objects or commanding characters, you'll be confronted by baffling puns, wordplay, and verbal trickery. For example: 'There are

some lunching mobsters here', to which you might reply, 'Munching Lobsters'. Of course you would, wouldn't you?

Other changes include the absence of directions to go in. The program simply names adjacent rooms, and you type 'Kitchen' or 'Stable' to go there.

We'd like to promise a review for next month, but the Pilgrim has been behaving a little strangely since receiving the game...

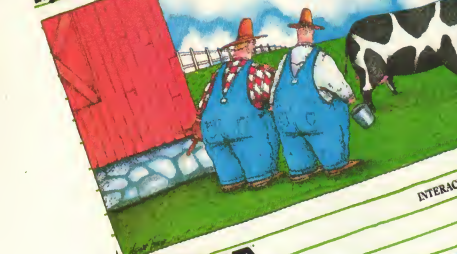
Yak attack!

Jeff Minter, that Camel, Sheep, Yak and Llama loving maestro of the C64 has turned his affections toward the 16 bit machines and is currently working on two Llamasoft products. The first release will probably be a game called *Die, Filth!* and will be available on the ST. It's an all action shoot-em-up featuring nine special weapons that the player collects to enhance his firepower, including the 'Vortex' which puts 15 planetoids around the player's ship (Yak shaped) in true *Nemesis* style. Should be ready for Christmas, and though the price is not yet fixed, the author hopes the game will retail for under a tenner.

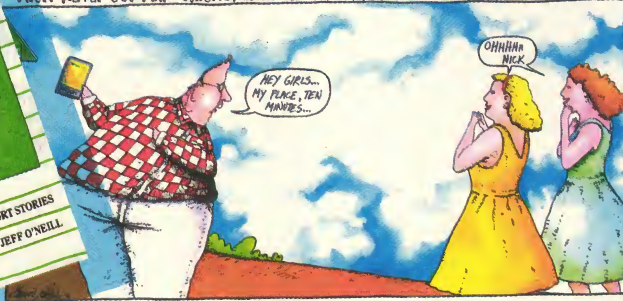
Also in progress is the next development in the *Colourspace* series of 'Light synthesisers'. *Light Mage* for the ST allows the user to create, interactively, dazzling light displays that accompany the user's favourite music. *Light Mage* will take advantage of the ST's built in MIDI port by allowing up to five machines to be linked together. Look out for it in early '88.

Nord and Bert Couldn't Make Head or Tail of It

Eight Tales of Cliches, Spoonerisms, and Other Verbal Trickery



Nick never got any chicks until he bought those Infocom games



3-D Digital Integration

Just round the corner from Surrey simulation fiends Digital Integration are three winter whoppers, all in glowing 3D. For the 8-bit micros there'll be the highly seasonal *Bobsleigh*, a sports game involving team funding as well as sleigh control, and *ATF*, an aerial combat game based on Lockheed's YF-22 advanced tactical fighter.

ATF's aimed, DI claim, at 'a brainy shoot-em-up audience'. Do they mean us?

Don't feel left out if you're an ST owner - you should be getting the fastest, slickest version of DI's third winter release *F-16 Combat Pilot*. The first Fighting Falcon simulator into the shops, *Combat Pilot* sees DI again scooping US heavy-

weights *MicroProse* on an all-American fighting machine: they previously beat *Prose* to the draw over the *F-15 (Fighter Pilot v. F-15 Strike Eagle)* and the Apache attack helicopter (*Tomahawk v. Gunship*). Wonder who will be first out with *Trident*?



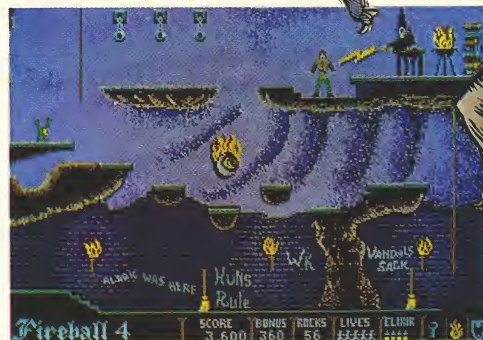
Digital Integration's Bobsleigh

Dark Castle

Can you survive the Haunted House on the Hill? If you think you might be able to, or have some interest in trying, Mirrorsoft's latest import from the US of A could be your cup of poison. *Dark Castle* by 360 Pacific Inc. appears on PC, Amiga and ST. It's an arcade



adventure; a first and very brief look indicates pretty graphics, but somewhat antiquated gameplay; you run around caves and leap on platforms chucking a handful of rocks at your pursuers. There'll be a full review in the next ACE.



Look no heads!

No decapitation sequences in the follow-up to *Barbarian*. Mary Whitehouse will be pleased to hear. Palace programmer Steve Brown, responsible for the aforementioned blood-letting beat-em-up, has turned his attention to more conventional methods of destruction.

Rimrunner is a multi-lane scrolling landscape shoot-em-up in which you control an insectoid warrior in conflict with the malevolent Arachnoids. Frantic boogying alien-killing anthems from Richard Joseph accompany the action. Expect the C64 version soon, with Spectrum, Amstrad, and Amiga conversions shortly afterwards.



Rimrunner C64: Insectoid vs Arachnoid from the programmer of Palace's Barbarian.

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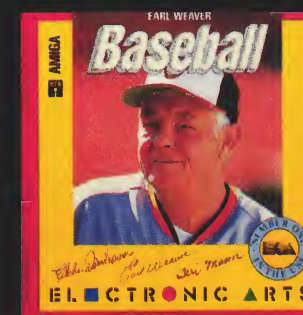
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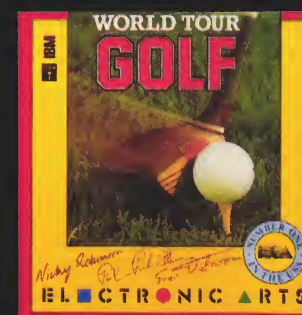
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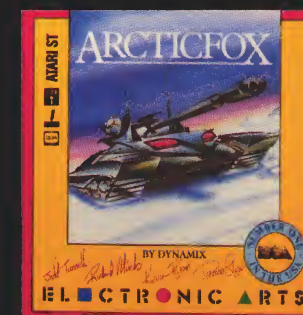
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STAND BY FOR ACTION!

Western Games Magic Bytes

It's open season on sports games all of a sudden, with software houses falling over each other to release spoof athletics titles. German giants Ariolasoft weigh in with this cowboy six-eventer on their new Magic Bytes label, out soon on ST, Amiga, C64 and Amstrad: prove you're the meanest arm-wrestlin,

tobacco-spittin' hombre north of the Rio Grande in a gruelling Wild West waggie-em-up, or look very silly in the attempt. Can you eat more beans? Can you milk the cow faster? Can you shoot more beer? Can you Can-Can? Find out in the full ACE review, real soon now pardners!



(Amstrad) Ready to rattle? Great colour from the CPC here, as you prepare to bust your biceps.



(Amstrad) Time to put your money where your mouth is: judge the distance right and you'll hit the spittoon at your rival's feet; overshoot, and you've got one mean hombre on your hands!

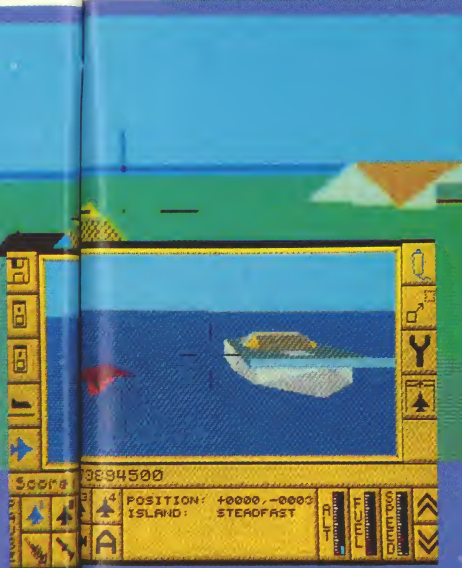
'Real soon now' is a phrase we've all grown to know and love over the years – but the juicy stuff on these pages is coming soon; and most of these games should be ready for review in our next issue. So don't miss it.



(ST) Out on patrol over one of Carrier Command's 64 islands, in plane no. 1.

Carrier Command Rainbird

This arcade/strategic biggie for Spectrum, Amstrad and various 16-bit machines hails from 3D specialists Real Time, and very impressive it looks too. It's you, an aircraft carrier, four planes and a whole load of ground forces against an identically equipped enemy task-force. You're fighting for control of an archipelago – 64 islands in all – and it isn't going to be easy. You don't just give orders: you actually fly the missions and fight the battles, all in Real Time's amazing solid 3D graphics. *Carrier Command's* ambitious stuff, but if the demos are anything to go by then Rainbird are surely on to a winner.



(ST) Your carrier's over, and it's back home to 'Mother' for refuelling and re-arming. The futuristic carrier's the centre of operations, and one of the eye-catching features too.

Airborne Ranger Microprose

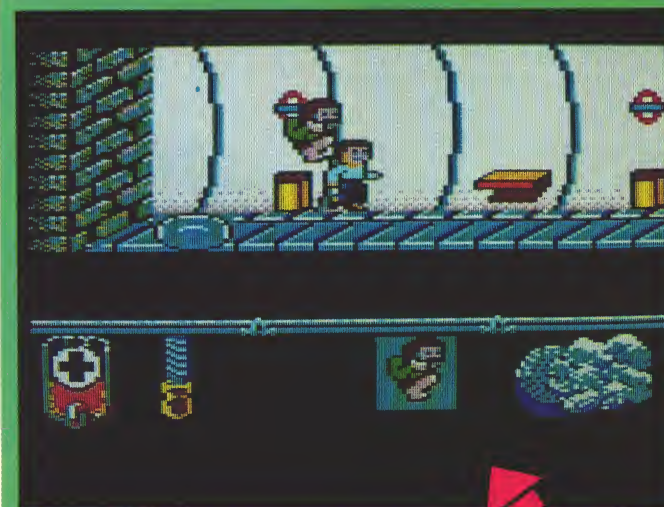
This is a kind of souped-up *Commando*, giving you 12 missions around the world on your C64. You're parachuted down into enemy territory and have to take out missile bases, rescue hostages etc. Terrain differs; arctic, jungle and desert are some of the options offered. On your mission you'll have to skirt minefields, take out pill-boxes and wriggle through trenches. As you play you can add to your character's attributes, save them and use them in the next game. *Airborne Ranger* looks to have what it takes to make an exciting action game; we hope to have a full review in our next issue.



You're pinned down in a trench by the hostiles' fire. Could it be time for a grenade?

Werewolves of London Viz Designs

There's a touch of the gruesome about this first title from Ariolasoft label Viz Designs. Taking its inspiration in roughly equal parts from *American Werewolf in London* and a whole load of old Hollywood shockers, *Werewolves* has you scouring the capital for food. Because you're a werewolf, 'food' means human flesh – Sloane Rangers, preferably – so you can expect some trouble with the law along the way. Your Fiona-hunt takes in rooftops, tube stations, parks and sewers: with 120-plus locations on C64 and Amstrad and over 200 on the Spectrum, there's room for a fair old slice of the Smoke.



((Amstrad) Down in the tube station at midnight, and you're hungry for sloanes. Is that a snack I see before me?



You're zooming in to enemy territory – but your stealth indicator (the bars) is too high; you've got to be sneakier than that. The map (lower left) shows your position relative to the target, while the radar display alerts you to the presence of enemy planes. On the right is a display of the weapons you're carrying.



Project: Stealth Fighter Microprose

Prose's latest C64 combat simulator looks pretty tasty stuff – assuming you can stomach 'Wild' Bill Stealey's 1950s-style Cold War politics. You pilot the erstwhile top-secret US fighter/bomber in any of a possible 100 missions. Using the plane's stealth technology you have to nip in, destroy installations and then nip out again.

The flight sim elements are there, but there's a whole lot of other stuff to occupy your mind as well – such as which selection from your possible 20 weapons you should take with you. Success means a return to base and a back-slapping reunion with your buddies over a few snorts of Jack Daniels. Failure means a gloomy drink alone as you mull over your ineptitude.

Eco

Ocean/Denton Designs

If you want a game that looks good and plays strange, just wait till this one hits the shops. (Don't hold your breath if you've got an 8-bit machine, mind you - Ocean tell us it'll be ST and Amiga only.) Eco is all about evolution: you start as an amoeba, and over successive genera-

tions must shuffle your genes around until you (as a species) reach human form.

Of course, it's not all breeding and mutating (though there's a fair amount of both). New-born offspring have to find food and avoid predators until mating time, so each stage in

the evolutionary process must be have the necessary qualities for survival: freaks designed simply to get you human fast (or give you a few very cheap laughs) probably won't stay the course.

The Pink Panther

Magicbytes

Another German-programmed game on the new Ariolasoft label, this hefty cartoon tie-in should bring that gentleman, scholar and acrobat to the screens of all the major home micros early in the New Year. And that ain't all, folks: hot on those pink heels will be the equally mammoth Tom and Jerry license.



(ST) Genetic engineering for a better way of life: design your own offspring, tailored to their environment - or your own aesthetic senses.

(ST) Here's one I made earlier: a vector graphics hominid is the end of the line for Eco. What next - cave paintings?



(ST) Heads you lose: our pink hero's taking a risk sitting in that chair - and the owner's taking a sleep walk!



(ST) Earth-moving equipment: want a big planet that's close to the sun? Want to fine tune that equatorial diameter? No problem!

Skate or Die

Electronic Arts

If you thought skateboarding was a nice peaceful pastime, EA have got a nasty surprise lined up for you. Their incoming C64 skate sim features some rather odd events alongside the standard ramp and downhill events.

How about an Inner City Downhill Battle against computer opponents Poseur Pete or Aggro Eddie? How about a Pool (cue) Joust with the formidable Lester? Well heck - you didn't think they meant 'die of old age' did you?



Practice makes perfect on those ramp moves - you hope!

SOMETHING HORRIFYING AND INEXPLICABLE IS GOING TO HAPPEN.....

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GREAT MICRO DISASTERS

THE NATIONAL MICRO DISASTER AWARDS 1987

Pete Connor and Steve Cooke staggered from the Exhibitor's Bar at the PCW Show, took a wrong turning on Level 9, and stumbled into the splendour of the Sir Clive Sinclair Suite, secret venue of the National Micro-Disaster Awards. Flicking the switches on their concealed Living Daylights-style miniature tape recorders, they were able to compile this exclusive report...

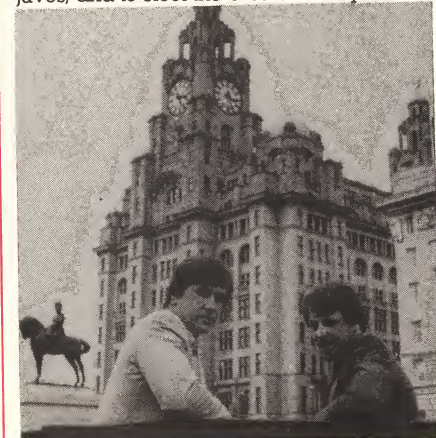
The assembled company includes Jeff Minter, Tony Crowther, Richard Branson, a Klingon, Samantha Fox, Jack Tramiel, an unidentified alien, Basil the Great Mouse Detective, Gary Lineker, Conan the Barbarian, a yak, and Maria Whittaker...

Enter JUDGE DEATH, brandishing a neuron whip.

DEATH: Attention punks, this meeting is now in session and I AM THE LAW...

(CONAN THE BARBARIAN faints).

DEATH: We are gathered here together to pass judgement on the computer industry; to purge it of unwashed, spotty, ineffectual juves; and to elect the Greatest Computer



The Good Old Days: Mark Butler and Dave Lawson of Imagine pose in front of the original Liver Birds.

Photo: Computer Trade Weekly

Disasters of all time. The meeting will come to order and I call upon Mr Richard Branson to read out the nominations.

BRANSON rises to his feet, grinning broadly. Cameras flash. He grins again, displaying that perfect set of teeth. Again the cameras flash as he attempts a third grin – but JUDGE DEATH lashes out with the neuron whip and restores order...

BRANSON: The first nomination is...

BRUCE EVERISS: Imagine! The old Imagine company, Eugene Evans, Wacky Waiters, the mega-games, the Ferraris...and Bruce Everiss!



Kirk and Spock wait for the game to beam down

(There is a loud moaning, cut short by a quick communal caress from the neuron whip...)

BRANSON: (grins cheesily) The first nomination is...

KLINGON: Come on chaps! There's no competition – what about *Star Trek*? We've been

Star Trek – beam me down, please!

This was going to be the licence to end them all; the cult TV prog was going to become a real 'mega-game', stunning the punters with its graphic brilliance and absorbing gameplay – all of it featuring your old pals Kirk, Scotty, Spock, Uhuru et al. Well, two years on they're still waiting to beam down to your local software store. For two successive PCW shows the program has been promised; neither show has seen it delivered. Why?

The reasons are shrouded in mystery. Some say that despite the reputedly enormous amounts of money spent on the design and programming (£60,000 to one individual, the story goes) the early versions were naff. Others murmur about clauses in the licence contract giving Paramount the right to veto any part of the game, from the shape of Spock's ears to the picture on the packaging. Will we ever learn the truth? Who knows. Will we ever see the game? Yes, we certainly will – and real soon now. The ST version will be around before Christmas, 8-bit versions in the new year. In fact, if you want to see it right now, just mosey on down to your friendly local pirate – ST versions have been available on the hackers network for quite some time, making *Star Trek* the most widely seen unreleased game of all time. How this will affect the game's sales remains to be seen.

waiting for that game out in sector 238 since *Star Date* 1985. I distinctly remember that Kirk fellow threatening me with it. But where is it, eh?

Imagine

Back in '83 Imagine were big, big, big. They were one of the snazziest companies around, with classy packaging and more publicity than Madonna. In fact, self-promotion was probably their strongest point. One of their juve programmers – Eugene Evans – made the Daily Mirror as an example of the new superstar, the whizz-kid programmer. Eugene posed nonchalantly by his Lotus sports car while figures of £50,000 were bandied about as his salary. Rumours spread about amazing 'mega-games' that would usher in a new era of computer fun – on the Speccy.

Well, it all ended in tears. One fine day – while the BBC just happened to be up in Liverpool filming a documentary about the company – the bailiffs came a-calling. Imagine sank under the weight of debts and dreams, while the name was bought to live on as Ocean's arcade label. Where are they now? Bruce Everiss – once the Voice of Imagine – is now working for budgeteers Code Masters as a one-man Think Tank. Dave Lawson and Ian Hetherington, erstwhile Imagine directors, are now directors of 16-bit software house Psynopsis. Eugene Evans is now programming for Mirrorsoft. His game *The Bermuda Triangle* should be around before Christmas.

SOFTWARE PIRATE: I've got a copy! Had one for yonks!

KLINGON: Yes, you and every other dirty pirate in the solar system. And honest games players like me are still waiting. It's a disgrace, a shambles. It's just not cricket.

BRANSON: And the first nomination is...

THE YAK: Owzat! One of your very first games, Mr. Branson. Do you remember how in this cricket prog – written in BASIC, I might add – you had to EDIT line 100 if you wished to change your team? Do you remember how the white on green graphics meant that the game was virtually impossible to watch for more than five minutes? Do you remember...

World Cup Carnival

More of an embarrassment than a genuine disaster. Basically, Brian, US Gold released an old Artic game with three 'enhancements' – practice screens – and a stack of pretty posters and badges. The soccer game itself was pretty poor, but what made some people sick as parrots was the fact that US Gold didn't mention the game's origins: they bought the game only to discover it was the Artic game they already owned. And it cost them two quid more than the original. Some carnival.

BRANSON: Oh, shut up! The first nomination is....

SOFTWARE PIRATE: *The Great Space Race* – the only game I could never be bothered to copy.

JACK TRAMIEL: Jeez, you guys don't know what a real disaster is! Let's talk some serious hardware glitches here – like that great British success the Oric Atmos.

The Oric Atmos

The Oric was a totally British computer; the Atmos was an upgrade that looked to have a Spectrum-beating specification. There was a slight problem, however; the operating system ROM contained a bug. Oric cleverly (?) got round this problem by bundling a cassette with the machine that you loaded before loading your program. So all you had to do to load a tape was – load another tape first. Neat, eh? Fact: the Oric was relaunched this year in France. Funny people, those French.



The Oric Atmos

The Great Space Race

Launched by software house Legend after selling a rumoured 150,000 copies of *Valhalla*, this game was expected to conquer the charts in the Christmas of 1984. Carried away by the general mood of enthusiasm, Personal Computer Games magazine commissioned a £1000 artworked cover and offered the original drawing (worth considerably more) as a prize in their Great Space Race Competition. Imagine the faces of Anderson, Cooke, & Connor when the game actually arrived. The industry shrieked in disbelief, buyers of the game shrieked with horror, and Legend never recovered, disappearing into obscurity a short while later.

Rumour has it that the last few remaining copies of *The Great Space Race* were shipped to a far-off country for an undisclosed sum, believed to be around 20p per copy. Even at that price, no-one in the UK would be likely to buy it.



Photo: Computer Trade Weekly

CHORUS: The what?

J.T.: The Oric Atmos, you dimbos. You know what I'm talkin' about; neat little red and black box that was supposed to take on and beat that Spectrum thing of yours.

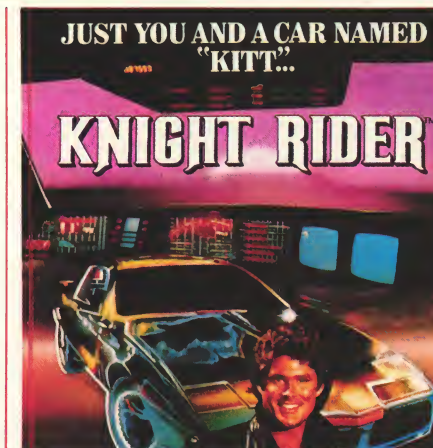
SAM FOX: Well how about something that combines hardware and software, big boy? Like that cute Mikrogen Dongle?



The dongle that almost killed a company. Mikrogen's *Shadow of the Unicorn* boosted your Speccy's memory to 64K, but cost the company a fortune. The game didn't live up to either the idea or the expense – neither did the sales.

BRANSON: Let's keep it clean, please – as Mrs. T said to me only a few months ago. Now, the first nomination is...

GARY LINEKER: Out in Barcelona the fans are still talking about *World Cup Carnival*. A real own goal, that one was.



BASIL THE GREAT MOUSE DETECTIVE: Come on Gaz. If you really want to talk about own goals try those two licensed games from Ocean – *Knight Rider* and *Street Hawk*. It seemed like they were advertised for years before they actually appeared – and when they did make it, what a disappointment! They were pretty bad. Of course, the whole business did some good; Ocean stopped advertising games so far in advance, and they vastly improved the quality of software produced from licences.

JUDGE DEATH: Get lost, creep! And you get on with it Branson, or you'll taste the gentle touch of my neuron whip!

BRANSON: Aye, aye sir! The first nomination is....

JACK TRAMIEL: Hey, what about that C5 thing that your Sir Clive used to peddle? Now that was one Lulu of a catastrophe. It really tickled us stateside.

BRANSON: Irrelevant – it's not a computer disaster. The first nomination is...

BRUCE EVERISS: Imagine! The old Imagine company. Eugene Evans, Wacky Waiters...

JUDGE DEATH: That's it punks! You're finished! I've had as much of this as I can take. I declare this meeting finished, kaput, over, closed. I'm going to terminate the lot of you! (The neuron whip cracks and whimpers of pain – or is it pleasure? – ripple through the assembled worthies as they are herded out in to the harsh realities of the real world.)

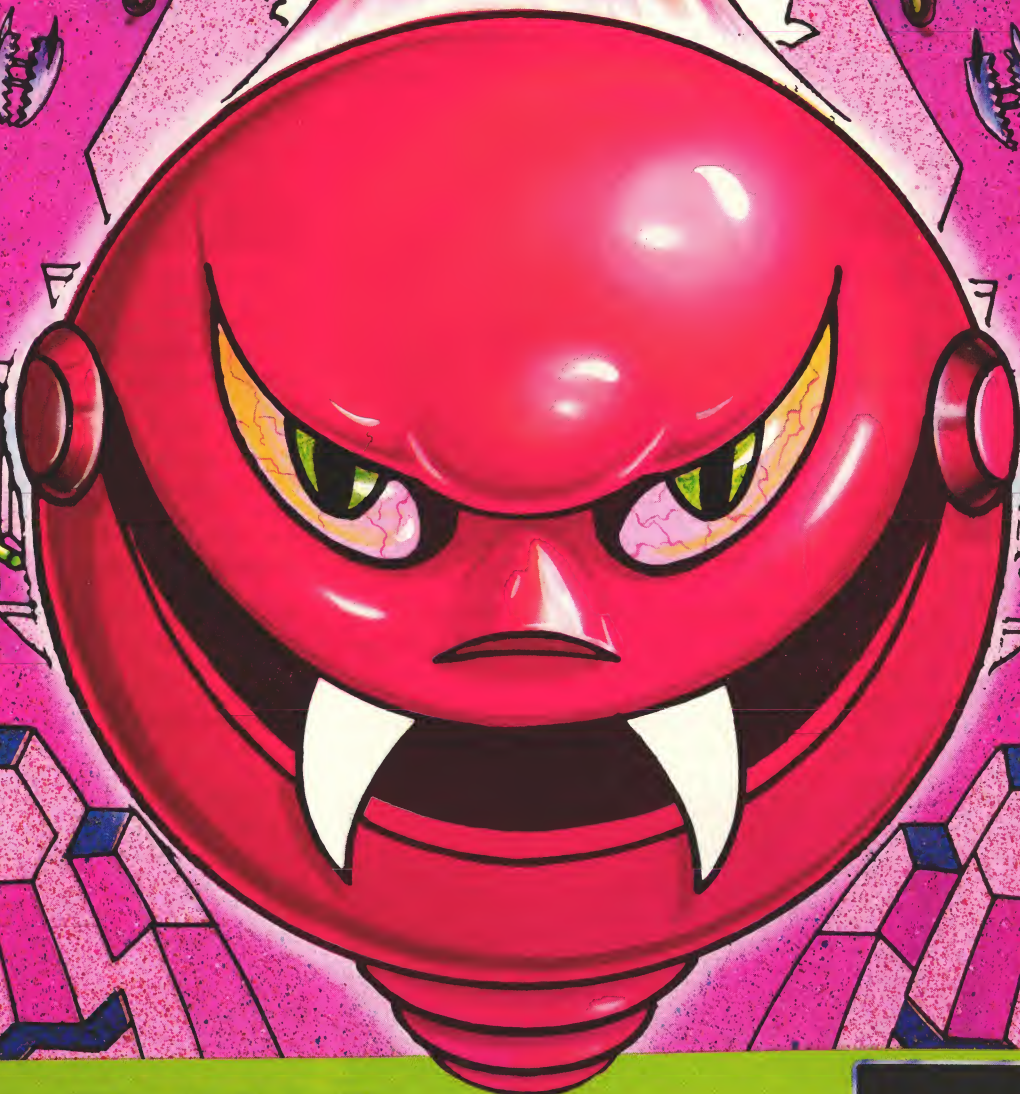
RED L.E.D.

**RED L.E.D. IS A CHALLENGE
NOT TO BE MISSED.
— COMMODORE USER**

**C.U.
Screen
Star**

**"GO OUT AND GET THIS GAME —
IT'S SOMETHING REALLY SPECIAL!"
— JULIAN RIGNALL: ZAPP 64**

STARLIGHT



REAL ARCADE ACTION AT ITS BEST!

The year is 2379: Earth's vast resources are finally running out (again!). You must bridge the path to the much needed matter supplies, using three ZMX all-purpose battle-droids to link up the vital cosmic-interface grid.

SPECIAL FEATURES:

- Full 3D smooth scrolling action
- 37 different landscapes
- Bonus levels, teleport pads and enemy generators
- Graphics by Pete James
- Sound FX by Tony Crowther.

**STARLIGHT
SOFTWARE**

C64/128 cass £9.99 C64/128
disk £12.99 AMSTRAD cass
£9.99 AMSTRAD disk
£14.99 SPECTRUM £8.99



■ Touché

My first reaction after reading D Webb's letter (*Missing MSX*, issue 2) was to fall down in an uncontrollable fit of laughter. But after about half an hour I became suddenly weak at the knees again, not with laughter, but with utter horror at the thought that he could conceivably be serious!!!!

Who's he trying to kid? Himself? The Commodore 16 has probably sold more units, never mind the rest he quoted! The last figure that I read about the C64, of which I am an owner, is 10 million (world wide total). In the weeks September 25 to the 9 October, covering two weeks' issues of PCW they announced the following New Releases.....

Machine:	Total New Releases
Amstrad CPCs	19
Atari XL/XE	1
Spectrum	29
BBC B	5
Atari ST	3
IBM PC & C'tibles	4
CBM16/+4	1
CBM64/128	35

It really speaks for itself! Doesn't it, D. Webb? A total of 97 new releases over eight machines and not one of them an MSX! I see that the software companies are falling over themselves producing programs for the machine. To be fair, a lot of the new releases are re-releases under a new label and price but I think the point is adequately made.

Don't get me wrong, D. Webb. I sympathise with you and hope the software for your machine increases but you can't blame ACE, or any other magazine come to that, if there is no software to review can you? My advice to you is do the same as I did when I bought a C16 then found out that that machine was a contender for the golden turkey award; it was easier to find the proverbial needle in the haystack than software. Cut your losses, sell the MSX and buy one of the better supported machines. The moral of the above is: don't buy a Pig in a Poke (excuse the pun, but I couldn't resist it) then moan when it doesn't grunt!

Whew! Now to the magazine, it's very good, reviews & rating system. I hope, nay trust, you keep up the good work!

Peter Leswell
Glenrothes

I thank you for your research; you've made my point much better than I could ever have done. I don't think I'd have been quite so cutting, though.....

■ First timer

This is the first time I've written into a magazine and I thought that I'd congratulate you, it's fab! just what I like to see. I have an Amiga and disliked the rude message in the workbench V1-2. Could you tell me who invented the Amiga? and why that message was included? Do you think the Risc Machine (Acorn's) will be successful? I am an 18 year old male seeking a female Amiga user to swap programming tips, games, etc,
Neil Chubcock
59, Woodcock Road
Norwich

That 'etc.' sounds a bit fishy to me, but here's wishing you luck anyway. The Amiga was originally conceived and designed by an American company called Amiga Inc., set up by three Florida doctors with a spare \$7 million to invest. The machine was developed, the company got in to serious financial difficulties and, after a whole lot of wheeler-dealing involving the figure of Jack Tramiel, became the Commodore Amiga. Why the naughty message was included is a mystery to me; but nothing connected with programmers is surprising, is it?

■ Silly letters

At last, a multi-machine magazine that supplies a thundering good read in addition to the many multi-colour adverts that magazines like yourselves need to carry in order to survive. You seem to have got the balance just about right. Although a dedicated machine magazine is perhaps a must for ANY micro owner, it is refreshing and informative, not to mention entertaining, to keep abreast of all the latest software and hardware developments on both 8 bit AND 16 bit machines.

I only hope the multi-machine format does not move the 'my machine is better than yours' element into a spate of silly letters. I have owned a whole range of machines in my time, (I'm over 35, wheeze) and everyone of them had their own good or bad points. Let us all simply support the machine that we prefer, and can afford, and not enter into letters page slanging matches with people who may prefer, or can afford, OTHER machines.

One small request with regard to your content. Can we PLEASE have a wargame/strategy game section. Most computer mags either forget altogether, or have a column or two every four months or so. Good games of this genre ARE

ACE LETTERS

All human life is here in ACE Letters; the man who bought a CBM Plus 4 to run a free game, the man who makes mincemeat of the MSXers, the man whose cat all but destroyed his computer. Read them, and then send your own opinions to ACE Letters, 4 Queen Street, Bath, BA1 1EJ

around, and can give many HOURS of mind-taxing entertainment, so how about some page space please?

Dave Tremlin
Chard

No, we won't be going for any 'Commy v. Speccy' debates, but we will keep readers abreast of the latest machines and try to provide them with the information on which to base their buying strategy. Talking of strategy, I hope you like this month's buyers' guide. We hope to be reviewing strategy games in a section of their own in future issue.

■ Sound and graphics nut
Welcome to the battlefield. I know you guys here have all 'been-there' before but welcome anyway and good luck. If issue 1 is the standard you maintain you'll have no problems; it was superb. I'm a sound and graphics nut and found the midi and graphics sections extremely well done. It's nice to have reviewers talking sense instead of talking down to us as if we were all *****s and not the people who fork out the cash!

I intend sending you samples of my *Deluxe Paint* work but would really like the disk back. How about if we use re-useable Jiffy's with

Controversy of the Month?

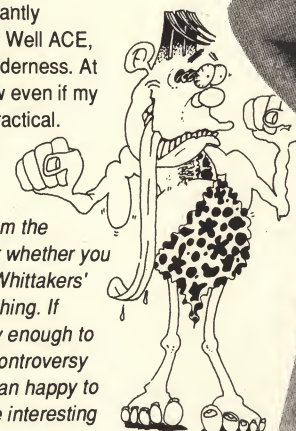
■ Bulging

Don't you think it might be an idea to include in your ACE Letters section a debating issue, some subject readers have voiced their view on. eg. I believe strongly in the deliberate abuse of the female sex in advertising. The subject has cropped up time and time again and I'd be interested to know what everyone else thinks about it. Do you agree in 'bulging' Maria Whittaker or extravagantly 'undressed' Athenas? Well ACE, am I a voice in the wilderness. At least tell me your view even if my 'debating' idea is impractical.

Demetri Panayi
Harrow

It's not quite clear from the wording of your letter whether you think 'bulging Maria Whittakers' are a good or a bad thing. If anyone feels strongly enough to join in and stir up a controversy then we'll be more than happy to print their letters (the interesting

ones, at least). Personally, I feel that a more intriguing issue is that of explicit violence; cop a load of the Rygar ads around, in which a circular saw is just beginning its journey through the torso of some poor geezer. Do readers feel this is just 'cartoon' violence, or do they think such images in both ads and games may have a pernicious effect?



S.A.E. label and return postage included?

I hope you run a regular galley for readers art work; maybe you could offer a nice inkjet/laser print out of the months' best piece! The chances of the average 'binary warhol' getting high quality hard copy of his/her work are (at the present) very remote indeed. Come on Ace, what do you say!

**Barry Walsh
Bury**

There'd have been some readers' pics in this issue's Graphics section - if we hadn't run out of space. Next month, we promise. The jiffy bag idea's not bad; we will try to send back disks as soon as we can.

Amiga airing

Having recently bought an Amiga, I have come across a few annoying points that I wish to air in your magazine.

1) Having upgraded from a 64, it is apparent to me that software houses are converting from 8 to 16-bit machines and are therefore reproducing identical software costing an extra £15 for a 16-bit

program and for the privilege of a disk-based program!

2) Mostly the software available for the Amiga is adventure-based. Where are all the good arcade conversions, such as a four player version of *Gauntlet*?

3) The Amiga's graphical powers greatly surpass anything capable of an 8-bit machine so, therefore, software should be written on 16 bits and then converted down to 8 bits, not vice versa (this would keep the quality of software up on both formats).

4) On trying to purchase Amiga software in the Cambridge area, all retailers said that they had no plans to stock Amiga software although they were already stocking ST Software. What is happening to the distribution of the few Amiga products which have been written?

5) The Amiga is the most powerful home system within an affordable price range, and yet the ST is attracting interest from the major software houses who are now starting to produce quality products, all of which could be improved on an Amiga!

6) I hope you will receive and review more Amiga software in the near future because a large

magazine can make or break a computer depending on the way it is portrayed within its pages. Given a chance the Amiga will become the most popular 16-bit machine. It is not getting the support it deserves from software houses and the popular computing magazines.

**Earl Alexander
Cambridge**

You should find that software is now starting to be developed on 16-bit machines and then ported down; e.g., Mastertronic's Arcadia label, which produces games in the first instance for arcade machines - but on Amiga boards. And next month we should have a bumper crop of 16-bit titles for review. As for buying the stuff, you could always try a reputable mail order service.

And, by the way, are you a real aristocrat or were you just christened that way?

What is a poke?

I'm sure I speak for many computer owners when I ask 'What exactly is a poke?' I'm sure hundreds of people just type them in, knowing it'll make something weird happen in the game. For example, infinite lives, invulnerability etc. Would it be possible for you to start a monthly write-in to help people with pokes and to give them information on how to make their own? Just think, you'd have to extend your 'tricks and tactics' section. You may also find there would be a lot more top tipsters.

**P Norton
Skelmersdale**

Look in Tricks 'n' Tactics next month and you should find an explanation by A. Boffin of just what is involved in Poking.

Down to business

Firstly I'd like to say that you've got a winner with this mag, it leaves the rest standing. The only thing that I would like to see introduced is a small business section similar to the ones on graphics and music. I have recently bought an Amiga to use for a variety of reasons, from game playing to business. What I would like to know is if there are plans to make the 500 emulate PC's like the Atari 520 can?

Also, do you think that there is any justification in the prices of Amiga and Atari ST software? Is it likely that the prices will come down eventually?

**Adam Morely
Leicester**



Sorry, but we definitely won't be covering any of that spreadsheety business stuff; you're in a tiny minority in asking for it. In fact, if you started a 'business users' club among ACE readers you'd probably be the only member. There is a PC emulator card under development for the Amiga, but we suspect it will work only in the 2000. Prices of 16-bit software are very high at the moment; next year they should come down substantially.

Bland, ordinary, boring

Did you like my last letter? I didn't. I thought it was bland, ordinary, boring...

Just like this one - which is why we aren't printing any more of it.

Where is it?

Firstly, a word of praise. I think your mag is absolutely fantastic. Your new rating system is excellent, all praise to the person who thought up that idea. Secondly, I have just read your section on budget software and noticed that it said *Rebelstar* is out for the C64. Please tell me if this is a printing mistake or whether it is true because however hard I look I can't find it in any of the shops.

**M T Alchorne
West Yorkshire**

It's a mistake sure enough; Rebelstar isn't available for the C64, which is why you can't find it in the shops. Our apologies.

What wuz dat?(Ed) 2

Your magazine is the best around, at least the best I've read. And in relation to this mag, some freak writes in and says your mag is boring! What does he want!! I'd like to tell R.R.MORANZANI (see *Drab and Boring* in issue 2) that if he

wants to read things like 'What wuz dat?' (ED) then he should go out and buy that rubbish elsewhere, and not try to convert one of the few serious magazines around into average run-of-the-mill drivel. If he wants to read that it is up to him, but there are quite enough of those magazines on the market and I do not want to see ACE degenerate into such childish pulp.

**D.L. Muncaster
Coniston, Cumbria**

Will R.R. Moranzani fight back? Buy our next issue to get another thrilling instalment of 'What wuz dat?' (ED)

Desperate for Art

I have just read with great interest your article The Graphics Scene. As an addicted graphics man I was interested in the mention of *The Advanced Art Studio* for the Spectrum. I live on the Isle of Wight and cannot obtain this program anywhere. Could you please advise me where I can obtain one, and at what cost?

**D. Chenery
Ryde, IOW**

If you can't get one in a shop down there, try a decent mail-order supplier. As a last resort you could try the suppliers, Rainbird. AAS costs around £16.00.

Smart buy?

I was lucky enough to get a copy of ACE last week and wishing to try out your free *Blue Max* game I bought a second hand Commodore Plus 4 computer. However, when I tried to load the program following your instructions I only got the following message on my TV:

DEVICE NOT PRESENT
ERROR
READY
RUN
BREAK
READY

Can you help me? Does this mean that my Commodore Plus 4 will not accept anything but C16/Plus 4 software? Can you let me know who supplies this?

**Name unknown
Glasgow**

You've got a bit of a problem here. Blue Max is a C64 program, and will run only on a C64, or C128 in C64 mode. The Commodore Plus 4 is a different kettle of fish altogether and can only run software specially written for it - of which, I'm afraid, there is not a lot about.

Helpline

Firstly, thank you for the excellent publication, it is a pleasure to purchase and read. Secondly, in response to Mr Hammond's letter (ACE Issue 2), an adventure helpline would be useful but my view is that this would limit the precious space needed for reviews etc.

I would like to recommend a couple of excellent fanzines aimed at adventure players only (No not a rival magazine!) They contain everything about adventures (tips, maps, reviews, letters etc) for beginners to the most seasoned player. They are called *Adventure Probe* and *Soothsayer* and at £1.00 each are in my opinion, the

'Adventurer's Bibles'. The address to write to is: Mrs Sandra Sharkey, 78, Merton Road, Wigan, Lancashire. WN3 6AT.

**David Brown
Portsmouth**

Split Pilgrim

I just thought I'd write to say how brilliant your magazine is, the first issue anyway. I haven't found the second in any shops yet, but I'm subscribing so I'll get the third. Is the Pilgrim the same one as in AA? I had *Gauntlet* on disc but I formatted it accidentally. If I sent it back do you think it would be replaced?

Will there be any articles on

sprites in the future? I would like to use them in my programs, but I haven't a clue how. I hope the mag stays brilliant.

**Smurf
Dublin**

Yes the Pilg is the same as in AA. If you explain clearly what happened to your disk, then the supplier will probably replace it. We may well be covering sprite creation in the Graphics section in the future.

Binders

Now that ACE has gained a loyal following due to the magazine's conciseness and humour (??) how

The Woes of Amstrad

Whoopee!

Whoopee! I have just received the second copy of ACE and what is this I spy on the front? Yes, it is another one of those fantastic free computer games (well the first 5 screens anyway) but there is one tiny problem. Yep, you guessed it. I'm one of those people who own an Amstrad: but not to be dismayed I gave the tape away to someone less fortunate, who does not buy your mag.

The point of my letter is, please could you think of all the Amstrad owners and give us a tape with something to Zap on it? It really is depressing when you have already spent this week's wages on all the special offers you were offering - at full price down the local computer shop.

**Martyn Ayson
Plymouth**

Poor student

Browsing through the Student's Union newsagent's I happened to come across a magazine called 'ACE'. Picking up the mag I quickly glanced through the pages. So far so good. Turning to the front cover a free tape, even better. I then looked at the price - £1.50, not so good. Being a student, money has to go on more important things (such as beer!). Also the tape was for the Spectrum and Commodore only. Definitely not so good (being an Amstrad CPC owner) After much pondering, I handed over half my grant and bought ACE issue two. After hours of reading I was pleased that I had bought it.

However, I think it would be a good idea if you made it so that the buyers (Amstrad owners in particular, since you don't put an

Amstrad selection on the 'free' tape) could have the option of buying ACE with or without the 'free' tape. Hence the magazine without the tape would be cheaper.

**D Williams
Newtown**

Deep regret

I was from the moment I picked up ACE annoyed! why! - well, a nice free tape. Blue Max, a game I have always required, the other side Gift of the Gods, very kind of you. So why am I annoyed, I will tell you why, the free gift is for

COMMODORE users AGAIN. They get free tapes often on THEIR own mags, they get cheap reduced games in all local shops, they get hundreds of new games released for Commodore. We AMSTRAD 464 owners (tape) get very few new games out, our mags are the last to appear on the newsagent shelves, we get far fewer war games and flight combat games. What do you do for us? Give a nice free cassette to the Commodore users. What's wrong with AMSTRAD users, we never get a free game? I like BLUE MAX, I like ACE 2 but you never give nothing to us Amstrad owners. Your ad for ACE 2 says available for every computer except AMSTRAD owners. I deeply regret I ever chose Amstrad Computer, I didn't realise the Commodore would be a better buy. More games available, and more free gifts.

**P Hall
Basildon**

Very angry

Well you're only two issues old and already you've made me angry; issues 1 and 2, free games cassettes for lucky old Speccy and Commodore users. What about all

us Arnolds? Well you say, you can have an Amstrad game at £8 off. Ok says I, here's my £6.95 send me *Star Games* on disk. Sorry, comes your reply, no *Star Games* on Amstrad disk, cop your £6.95 back. Hang on a minute though, just because you now say you can't supply what you first offered to do, why didn't I get offered a second choice? This way I feel I've been cheated out of my £8 off introduction offer. As far as I am concerned it stinks! I hope you can investigate this sad affair for me.

**R A Adams
Welwyn Garden City**

Well, life is pretty tough for Amstrad CPC owners these days. But we did offer a pretty good alternative to the cover games - i.e. massive savings on new games. The idea of selling the mag cheaper without the games is a nice one, but thoroughly impractical, I'm afraid. Mr. Adams' complaint about Star Games is a justified one; we were told by Gremlin that the compilation would appear on Amstrad disk, but they changed their minds - too late for us to do anything about it in the magazine. You could, of course, send the money back to our subs department and claim another game. If you feel very strongly about it - if, for instance, you subscribed simply on the strength of the Star Games bargain - then we'll refund your subscription.

Two final points; the amazing competition on the cover of this issue should appeal to all computer owners; and in our next issue we hope once again to have a very attractive proposition for everyone, irrespective of race, colour, creed or computer.

Freebies

Bubble Bobble bug?

There was a bug in *Bubble Bobble*. If you press keys 4-9 all at the same time player two will come on to the screen at any part of the game. Other than that, it is a brilliant idea having a game on the front cover.

Tony Pole

Weird happenings

I'm writing to you about some unexplained weird happenings in issue 2's *Bubble Bobble* game. Apart from enjoying myself to pieces, I'm wondering firstly, why a huge apple appeared at the bottom of the screen and what it was I must have picked up and secondly, why did rows of pulsing hearts appear and everything else disappear just when I was enjoying myself the most? Even more wows than that, when I got all the hearts the thrilling message 'PERFECT' appeared on the screen and then, da-da daaa! GAME OVER was printed underneath.

**Joanne Walls
Great Dunmow**

Beat that!

On *Blue Max*. I got 7430 and on *Bubble Bobble* I got - wait for it -

an amazing 456,000. Beat that! This is how I got that amazing score. All I did was eat the objects that looked like soda bottles, then eat all the symbols that appear like musical notes or oranges. If you eat all the symbols within 30 seconds you get 100,000 points added to your score. Keep up the good work.

**Robert Barbour
Trowbridge**

Cheesed off

I'm fed up! On the cover of Issue 1, you gave BLUE MAX away for my computer - I already owned it. But, as if that wasn't bad enough, you put a 5 screen demo of BUBBLE BOBBLE on issue 2's cover - and, of course, I already had it. It's just not fair. The excellent content of the magazine made up for it though, so I'll let you off. Your questionnaire was great, though a little easy (I managed to score 86 out of the 88). Please do some more in future issues, and make them harder. The reviews are top class - though they looked a mite boring in the first issue (The second issue was a great improvement).

**R Troughton
Keighley**

about something to ensure that the magazine can still be read in the 21st century — a binder!!

I now have a rapidly growing collection of ACE and would like to preserve this in a suitable receptacle — a binder!

The above article would cost approx £4.95 and would be in a suitably tasteful colour (black, red, blue, white, gold, etc.). It would have the capacity to hold up to 12 glorious issues and would be available to the public before the end of your first year.

Philip Latham
Cheshire

They're on their way — probably in a couple of issues' time. And they'll cost something like the figure you suggest.

Who's the creep?

Your competitions are brill. I love the glossy cover. How about some typeins? And who the hell is the weirdo on the cover of the November Issue?

Mac
Eastcote

Listen, Mac — the weirdo's got your number, so don't go sayin' no more mean things about him. OK?

Are listings a bore?

Listings are not 'a bore' — to the unemployed — which, thankfully, I am not. They help pass the time and give software to people who would not otherwise normally be able to afford anything but a little budget software. They also teach such people how programs are put together; who knows, an unemployed listings freak may succeed in writing a good game and get off the dole. Don't knock listings, please!

Don Griffin
London

You're entitled to your opinion, Don. Even if it is wrong. But we still aren't going to print listings.

Cat-astrophe

Could you please help me? My cat came into my bedroom 2 months ago and knocked my good old Amstrad keyboard off the monitor which was on the floor and broke the Shift and Del keys. Do you know if I can buy some new ones? If so, where? Keep up the good work lads.

Stuart Gayns
Welling

We don't know of anyone in your neck of the woods; we suggest you try the shop where you bought the machine. If that doesn't bring any joy try Amstrad. Or you could phone some of the people who advertise Spectrum and Amstrad repairs in various magazines.

PC please

Where magazines fall down is their treatment of the IBM PC. I accept that the PC has virtually no usable sound capabilities, but Starglider doesn't suffer when compared to the 8-bits and the gameplay is equally as good as the ST.

What I'm basically asking for is some serious coverage, not just a passing reference to a 'boring old PC clone'. How can 16-bit, 8MHz half-a-megabyte memory computer with 16 colour hi-res graphics be boring?

Roger Cope
Exeter

We're trying to provide that coverage; one PC game is reviewed in this issue, and others are mentioned in our Updates pages. We'll try to cover all PC games released.

COVER COMPETITION

Superlatives fail me for this latest ACE competition; brilliant, fantastic, incredible, amazing, otherworldly....they just aren't strong enough, because in conjunction with Silica Shop we're giving away FIVE Amigas, plus FIFTY superb software titles. The whole kit and caboodle is worth nearly £5,000 at street prices.

1st Prize

The tastiest prize in the competition is

**AMIGA 500
1081 COLOUR MONITOR
50 SOFTWARE TITLES**

Runners Up

FOUR runners up will each receive

**AMIGA 500
TV MODULATOR
5 SOFTWARE TITLES**

That's a whole lot of entertainment for five fortunate people. But we're not giving something for nothing — you're going to have to work hard to win these prizes, and that word square on the front cover is no doddle. Full details of how to enter are on the card, but remember that the closing date for entries is Friday December 11th. Winners will be announced in our February 1988 issue, on sale real early in January of the new year.

The Hot 50

Here's a complete rundown of the software the word-square winners will be playing on their Amigas.

All prizewinners will get

Marble Madness, Goldrunner, Karate Kid 2, Barbarian

In addition, the winner of the first prize will receive

Ogre
Ultima 3: Exodus
Monkey Business
Borrowed Time
Hacker
Mindshadow
Arena
Brataccas
Deep Space
Terrapods
Guild of Thieves
Jewels of Darkness

Knight Orc
The Pawn
Silicon Dreams
Starglider
Winter Games
Championship
Baseball
Championship
Football
Championship
Basketball
Gnome Ranger

Ninja Mission
Mouse Trap
Plutos
Silent Service
Shanghai
Tass Times in
Tonetown
Challenger
Cruncher Factory
Demolition
Dr Fruit
Final Trip
Phalanx
Leader Board
Leader Board
Tournament Disk
Famous Course Disk
Snooper
King's Quest 3
Space Quest
Sky Fighter
Space Battle
Adventure



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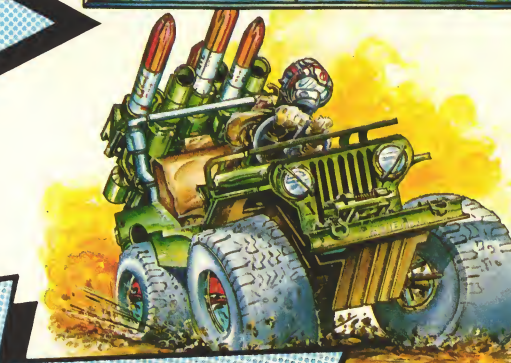
YOU ARE THE PILOT OF THE SLAPFIGHTER ON THE EVER HOSTILE PLANET OF ORAC. TO AID YOU IN YOUR CHALLENGE COLLECT ICONS TO SUBSTANTIALLY INCREASE YOUR FIRE POWER AND SPEED. SUPERB GRAPHICS AND SPLIT SECOND TIMING GIVE THIS GAME THE ADDICTIVE EDGE.



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ARMY MOVES



THE BLOCKBUSTER!

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TAITO
COIN-OP

If you have any difficulty in finding a dealer who stocks any of these products for your Atari ST then you may purchase them direct from Ocean Software by detaching and completing the order form below. Send your order together with a cheque or postal order made payable to Ocean Software Limited for the full amount direct to: Ocean Software Limited, 6, Central Street, Manchester M2 5NS. Please send me:
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Total amount enclosed £ _____
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ADDRESS _____
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ATARI ST

Screen shots taken from various computer formats.

HOLD ON A SEC,
JUST GOT TO FINISH
THIS ROUND

I WON'T
BE LONG,
HONEST

JUST ONE
MORE GO...

PLEASE?

© MIRRORSOFT 1987

What ARE they playing?

ARCADE ACE

Andy Smith reports from high in the skies on the latest aerial combat games zooming in to the coin-ops; *Skywolf* and *After Burner* send his adrenaline soaring to new heights.

AFTER BURNER

Sega
20p per game/50p for three
Upright cabinet version

This game created something of a fuss when it appeared – largely because it was played in a rocking and rolling sit-down cabinet that gave the player a real sensation of high speed mile-high action. But how does the upright version shape up?

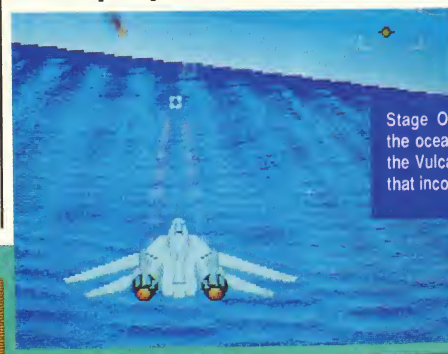
The unusual price set-up of the game means that for 20p you get three planes, and for 50p you get nine. These are all used up one after the other; your 50p actually gets you one mega-game rather than three separate ones.

Having deposited your choice of coin you grab hold of the large metallic joystick in one hand and the throttle control in the other and from then on it's just solid action all the way. You control a jet fighter flying low over changing scenery continually scrolling towards you. Your view of the plane is from just behind, and it stays more or less central to the screen while everything

else scrolls around it. Just in front of your plane is a small white square – your sight for firing your two weapons at the incoming jets that are hell-bent on blowing you out of the skies.

Your first weapon is the 'Vulcan Gun', basically a rapid-fire cannon. The second weapon (activated by a separate button on the joystick) is your heat-seeking missiles. When you go flying toward the enemy, your sights will lock onto a target and the machine screams FIRE at you. You then let loose with a missile which will rocket toward the target while you bank left-right in a (usually vain) attempt to dodge the missiles that have been fired against you.

In the top right corner is a very simple artificial horizon which is a guide to the position of your plane relative to the ground.

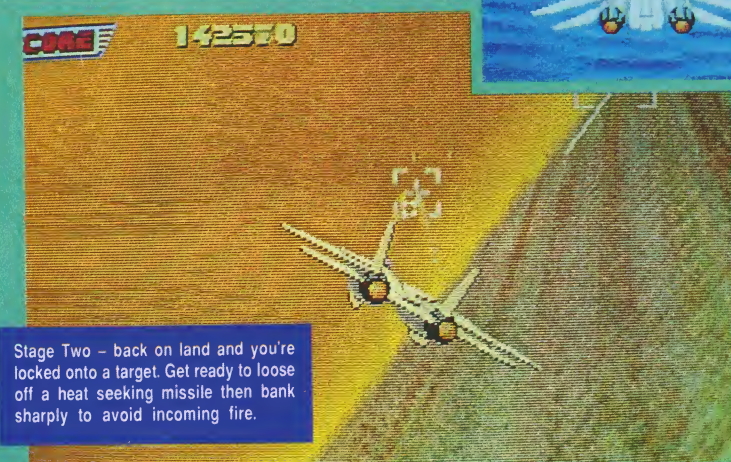


Stage One – skimming over the ocean and it's time to test the Vulcan Gun. Watch out for that incoming missile.

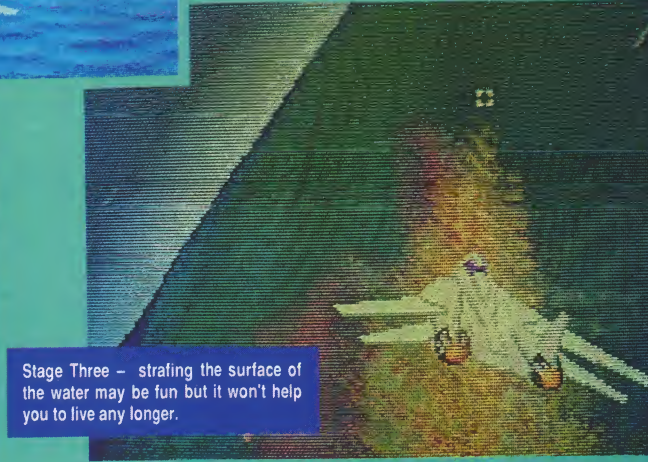
With the enemy coming at you from in front and behind, the action is sheer, unmitigated destroy-and-survive stuff. The only rest you get during the game is when a large plane flies overhead and releases a cable, allowing your plane to automatically lock onto the cable and re-fuel. This happens whenever you get low on fuel and the player doesn't participate in any way.

After Burner's graphics are astounding; vapour trails from the missiles, the ground landscapes and explosions are breathtaking. The scrolling is not quite so hot; when you're flying along at Mach 159 or whatever, then the scrolling is superb, but should you get hit and go plummeting toward Terra Firma then as you lose speed the scrolling gets worse and becomes very jerky and very blocky. For the impression of speed and no holds barred action then *After Burner* is a winner, but it will take you a fair few goes to get the hang of the controls. However, despite the

sometimes breathtaking graphics, it really is no more than an average arcade shoot-em-up if you don't play the sit-down version.



Stage Two – back on land and you're locked onto a target. Get ready to lose off a heat seeking missile then bank sharply to avoid incoming fire.



Stage Three – strafing the surface of the water may be fun but it won't help you to live any longer.



That Hercules is dropping pilots for the enemy jets, so blast him out of the skies.

SKYWOLF

K&G Co.
20p per game

This fast and furious shoot-em up has you at the controls of an up-to-the-minute helicopter whirlybirding around a number of parallax scrolling landscapes.

You're armed with two weapons, a front-firing cannon and torpedoes (activated with separate buttons) and your objective is simply to reach the end of each stage. That's not going to be easy because you're up against a constant barrage of flak from both airborne and ground-based installations. At the end of the stage a heli-pad appears and the player lands on this to re-fuel before setting off for more action.

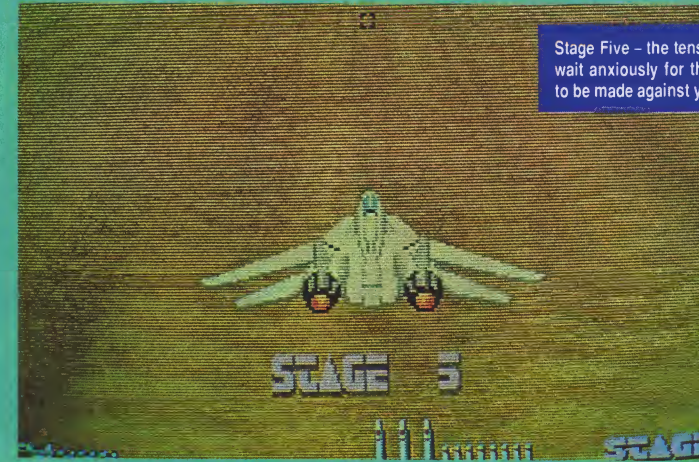
The enemy attack using a variety of weapons including huge missiles that come flying over hills in the background, and aircraft that come screaming across the screen toward you. A quick blast with your front

cannon will soon despatch most of the airborne assailants but you'll have to drop torpedoes to destroy anything on the ground. These ground targets include tanks that rumble onto the screen and fire salvo after salvo of deadly missiles at you. Once you get a little way into the game several small people appear on the ground running smartly toward their jets which are lined up along a runway. Dropping torpedoes on these chaps may seem a little cruel but at least it means they can't climb into their cockpits and come chasing after you.



Extra weapons are available from time to time in the shape of green parachutes that appear on the screen; collecting these before they float to the ground increases your fire power and makes your job a little easier.

The scenery changes for each stage, adding variety to the game and giving you something to work toward. *Skywolf* isn't the most astounding game graphically but it's very tough and it's very addictive. Once you get used to flying your chopper and learn some of the formations of the attacking craft the game just gets better and better.



Stage Five – the tension mounts as you wait anxiously for the inevitable attack to be made against you.



The tanks have reduced you to that pile of rubbish in the middle of the screen.



Bullseye! At the end of the first section you've despatched the last of the enemy.



Happiness is an end of level heli-pad. You don't get much of a breather though before you have to launch yourself into the next stage.

XENOPHOB

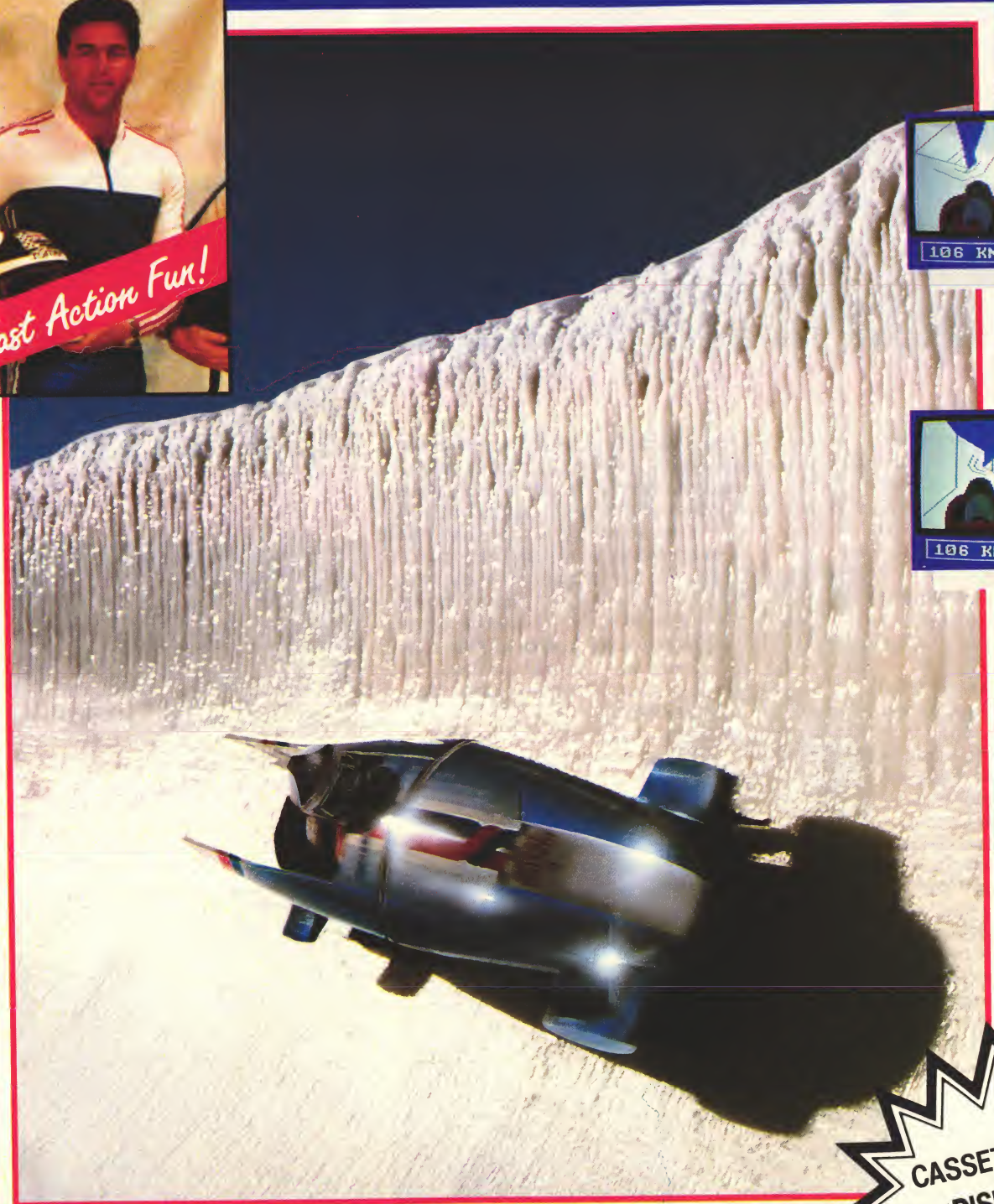
Red hot in the coin-ops at the moment is *Xenophobe*. If you get the chance to look over someone's shoulder while they're playing the game, you'll be confused by what appears to be a strangely deformed man blasting away at large green balls. In fact, the man is crawling around in alien-infested corridors in which he's too tall to stand up. It's an interesting game, and we hope to report on it in more detail in a future edition of ACE.

FACT: the word xenophobe means 'one who fears or hates foreigners.' Sick, sick, sick.

FREE SOFTWARE!

Don't forget that we're awarding software prizes for the best arcade game tips we print each month. In the last issue Paul Walsh's tips on *Rolling Thunder* earned him a free copy of *Renegade* for his Spectrum; you could be next! Send your gems, stating which computer you own, to Arcade Tips, ACE, 4 Queen Street, Bath,

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MUSIC

Sampling Safari

Mark Jenkins looks into the world of sonic skullduggery...

Sound sampling has dominated the music business over the last couple of years, insinuated itself into the world of computers (both for games and 'serious' software) and looks set to provide a healthy income for a whole battery of legal types in the near future. What's cooking?

First and foremost, sampling is hot news and that means big money. What we're talking about is pinching real sounds and using them for your own applications - in music, games or business. A little discretion is required, however - if the original sound belonged to someone else for one reason or another (say, if it's an entire snatch from a song), then the owner could justifiably be annoyed at your use of it.

To 'sample' a sound you need, depending on your requirements and budget, to select your equipment from a whole range of options, from a cleverly programmed home micro to a costly dedicated musical device, or a whole computer-based keyboard system which could set you back around £100,000. We'll be looking at all three categories in the coming pages - with the emphasis firmly on the affordable end of the market.

began to incorporate short taped sounds or long repeated loops into classical avant-garde pieces. Karlheinz Stockhausen, Edgar Varese and Pierre Boulez were the main culprits here, and most of the results were pretty unlistenable.

This 'Musique concrete' (concrete music) developed musicians' desires to be able to use full, rich, natural sounds in their more experimental compositions. As we know, electronic musical instruments have difficulty in sounding natural and full, and it wasn't long before some compromise was achieved. This came in the form of the **Mellotron**, developed by a firm in Birmingham called Streetly Electronics. This keyboard played long sets of tape strips - one three-track tape under each key. The tapes had been laboriously recorded with sets of instruments such as Cellos/Flute/Choir, or Brass/Organ/Violins, so playing the keys could result in enormous orchestral sounds. The Musicians' Union was immediately up in arms - they saw the Mellotron replacing whole orchestras for some jobs - and certainly early users such as The Moody Blues, Tangerine Dream, Mike Oldfield and Kraftwerk were achieving effects with the Mellotron which a conventional orchestra

ous limitations. At first, therefore, only short sounds could be stored, which excluded choirs, flutes and strings. What the memory chips could manage, however, was a couple of drums. That's why the first commercial sampled musical instrument was a drum machine - the **Linn LM-1**. The Linn is still in use today, sounding ten times more authentic than the clicky-boom boxes previously available, and its designer Roger Linn is still around, now working for Akai.

Around the same time as the Linn, an Australian company called Fairlight launched the **CMI (Computer Musical Instrument)** which was capable of longer sampling times, allowed the user to capture sounds himself, could arrange sounds into long sequences to compose tunes, and cost around £18,000. The latest Series III CMI now costs £55,000. Next up was the **Emulator**, from the American company E-Mu. Lacking most of the Fairlight's complex facilities, it simply recorded one sound for the top half of its keyboard, one sound for the bottom, and a short sequence using one or both sounds. E-Mu too are still around and now onto their Series III model.

Micro Sampling

As micro computers became popular, some manufacturers created sampling add-ons, but these were usually monophonic - playing only one note at a time as opposed to six, eight or even sixteen. The **Ensoniq Mirage Keyboard** smashed sampling price barriers - it doesn't have very long sampling times but arranges the available memory in very efficient ways. Then Akai's range of budget samplers, which don't have a keyboard at all (they have to be controlled from a keyboard or computer via a MIDI interface) came onto the scene, which takes us more or less up to the present day.

The emphasis in the world of sampling nowadays is fourfold; longer sampling times, higher playback quality, lower prices and larger sample libraries. The fact is that although sampling your own sounds is very satisfying, it can be time-consuming, and having hundreds of sounds already on disk ready to be called up is practically vital for the working samplenaut.

Below we've looked at a few sound samplers from a few pounds to a few thousand pounds - the field is so busy nowadays that there's a sampler to match every need!



Casio's SK2100 - 12 presets, 4 samples plus editing options for around £465. See review later in this feature.

Sampling history

Sound sampling has been around ever since the invention of the gramophone record. John Cage in his 'Imaginary Landscapes' compositions had the musicians moving gramophone needles around on a disc years before the modern scratchin' techniques were invented in the States.

When magnetic tape became common around the time of the Second World War, composers quickly saw its potential and

would be hard-put to match.

But the Mellotron had problems - the tapes stretched and snapped and the machine as a whole tended to go out of tune. Streetly tried to stabilise the instrument but what was really needed was a reliable, no-moving-parts electronic method of recording the sounds in the first place. Professionals in the audio test equipment field had already realised that it was possible to record a sound in tiny sections - 'sample' it - and store the results as a stream of numbers, but the cost of memory at that time imposed seri-

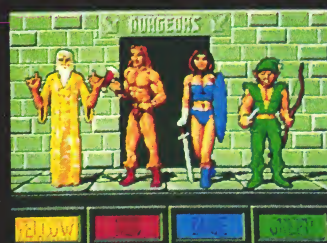
THE PHENOMENON CONTINUES

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acid puddles, forcefields and moving exits make your progress all the more difficult. But there are mystical amulets to be gained which will enhance your powers to repel the monsters, walk through walls or increase your fire power. You may even move some of the maze walls to your advantage. Gauntlet II is not just a further episode in this enthralling crusade, it's a whole new experience in action packed adventure.

The mind blowing sequel to the No.1 smash hit!



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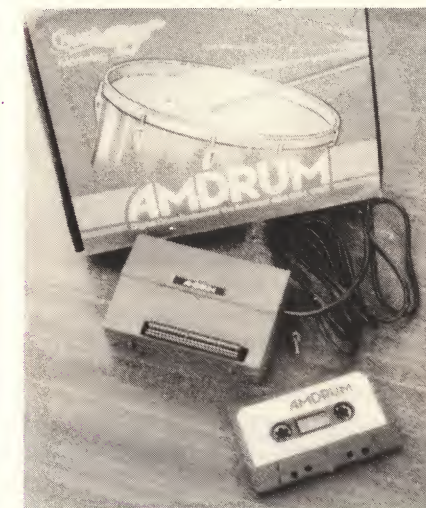
AMSTRAD
£9.99 TAPE £14.99 DISK

SpecDrum/AmDrum

Cheetah Marketing

These two units turn either your Spectrum or Amstrad into a drum sample player (which you can use to take your own samples if you buy an optional add-on) to arrange sampled sounds and play them back in long patterns.

Both packages come with large numbers of sounds on disk or tape and are available through Boots and other well-known computer stockists. The basic package comprises an interface which acts as a digital-to-analog converter, to turn digits back into audible sounds. The packages can cope with two sounds simultaneously, which is all you need for very convincing and powerful



Cheetah's AmDrum turns the Amstrad into a sampled drum machine



Cheetah sampler for the Spectrum

drum patterns, and can play through your micro monitor or hi-fi.

In each case you can start by choosing the sounds you want, making up basic patterns, and storing them in memory. Patterns can be composed in 'step time' (where every beat is the same length) or 'real time' (where you play in the beats 'live' and the computer shows up even the slightest mistake in your timing).

New kits of sounds for the SpecDrum and AmDrum are being released regularly, and there's even a Users' Club. You could try out the 'Latin Kit and Editor' or 'Electro Kit and Editor' which cost £3.99 and £4.99 respectively. The 'editor' section allows you to combine sounds from different kits to create your own distinctive combination of drums.

Playback quality is on a par with drum machines costing around £300, so the packages can be highly recommended.

Sampling	Optional
Editing	Pattern Editing
Ease of Use	Good
Price	£24.95

Sampling Glossary

The world of sound sampling is full of baffling terminology – here it all is, explained as simply as possible, so you'll find it easier to understand the sales talk – and follow the user's manual once you've made your choice.

Sample time

The longest sound the unit can play back, as determined by the amount of memory it has available.

On many samplers, the total available can be split up into two, four, or more shorter samples.

There's a trade-off with Playback Bandwidth (see below) though – you can get a longer playback if you're happy with a lower bandwidth. For example – your Akabishi SM-1 Sampling Machine may offer one second of playback with the same quality as a Compact Disc, but you'd get eight seconds if you're willing to have a sample which sounds as if it's being transmitted over a telephone line.

Playback Bandwidth

Otherwise known as Frequency Response, and determined by the highest pitch (or audio frequency) with which the sampler can cope. A sampler with 8kHz (eight thousand Hertz or cycles per second) bandwidth could sound fairly reasonable; 10kHz is better, 16kHz or more is ideal. Anything with around 4kHz will sound like a telephone ALL the time and shouldn't be considered for semi-professional use.

Sampling Rate

According to an obscure piece of physics called Nyquist's Law, a sound sampler has to look at an incoming sound at least twice as often as the highest pitch it wants to reproduce. So a sampler with an 8kHz bandwidth should have a sampling rate of 17kHz (to be on the safe side). With low-quality samplers you'll often see the Sampling Rate quoted instead of the Bandwidth – it looks better!

Keyboard Mode

Some polyphonic samplers such as the Akai S700 and S900 are also multi-timbral, meaning that each voice can play a different sound simultaneously. This means that you can play back a whole composition on just one sampler. Other keyboard modes include Split (a different sound on the top and bottom halves of the keyboard) and Layer (or Dual) where two sounds are played simultaneously.

Microvox 64

Supersoft

This MIDI-compatible unit for the C64 can be played from the micro keyboard or from a synth or sequencer. It offers very high quality and several additional features such as echo and pitch shifting. The software, arranged in logical pages, allows you to take a sample, edit it to length, store it away on disk, and replay it in various ways. Although Microvox can only make one sound at a time, it is possible to make up to 16 different sounds alternate – so you can create complete drum patterns as long as no two sounds are programmed to coincide.



Microvox for the C64 – useful kit, useful price

Supersoft have issued a sample library of 123 (£29.95) sounds spread over five double-sided disks 'Orchestral and Strings', 'Wind and Brass', 'Guitars and Bases', 'Drums and Percussion', 'Keyboards and Miscellaneous'. Most of these are very impressive, and give you all you could ever want to create full orchestral pieces in conjunction with a four-track portastudio.

A complete Microvox system is around £200 but supplies are a little uneven now. There are a few about on the second-hand market and they can be highly recommended for C64 users who want to get into sampling.

Sampling	2s at 10kHz
Editing	Envelopes
	MIDI assignment
Ease of Use	Fair
Price	£200

SK2100

Casio

Casio, the people who created the whole portable keyboard market, are also the people who made sampling keyboards affordable. At the budget end of their range is the SK-1, which sells for only £99 – although limited in some ways, it will teach you all the basics of sampling technique.

At the top of Casio's portable sampler range is the SK2100. The 2100 has four octaves of full-sized keys, plays eight-note polyphonically, and in traditional portable keyboard style, features melody and pattern memories, 20 auto rhythms, 2 programmable rhythms, single-finger chords, drum fill-ins and synchro-start (so that accompaniment starts as soon as you hit a key).

On the sampling side, the 2100 can record a sound through its built-in mike, loop

it, reverse it, transpose it to a new key, alter its volume envelope and store it even while the power is off. Sampled sounds can be played polyphonically and maximum sample time is just over 3 seconds at 10.113kHz sampling rate (about 5kHz playback frequency response).

You can split up the sample memory into four shorter sections and use these as additional percussion sounds. The 2100 also features 12 upper keyboard synth sounds, 10 lower keyboard synth sounds, and four built-in sampled sounds.

At £425 the 2100 offers great value for money and would be useful for home, amateur, and semi-professional applications. The two main disadvantages are that you can't save sounds to disk (you'd have to carry around a cassette tape of the original and re-sample it on stage) and that there's no MIDI input.

If you have less cash to spend, try the SK200, similar but with miniature keys and half the sample time for £279, the SK100 which has mono rather than stereo speakers for £225, or the basic SK-1, a tiny four-note polyphonic hand-held sampler for just £99.

Sampling	3.2s at 5kHz
Editing	Reverse, loop, envelope
Ease of use	Very good
Price	Under £425

S900 System

Akai

The S900, launched just over a year ago, is still flavour of the month with many pro and semi-pro studios and musicians. You'll sometimes see it in a studio's effects rack because it doesn't have a keyboard; to play it, you'll need a micro with sequencing software and/or a MIDI mother keyboard such as the Akai AX73.

If you buy an S900, make sure you have the latest Version 1.2 firmware which allows you to use the machine more effectively for replacing drum sounds, to ignore MIDI sound change commands, to respond to MIDI volume data and so on. Also available is Software Version S9V2.0, which comes on an optional disc at around £50. This adds ten new functions which go by such arcane titles as Improved One Shot Mode, Dynamic Filtering with Attack, Adjustable Crossfade Time Skew, and Key Group Copy - to name but a few.



Akai's S900 - 12-bit sampling from 7.5kHz to 40kHz. Maximum sampling time is just over a minute.

Sample Applications

At the basic level - such as the Music Sales C64 sampler - you'll be sound sampling mainly as a novelty. Surprise and amuse your friends by pinching their dulcet tones and playing them backwards, sideways, or three octaves higher than normal. Making someone sound like Pinky and Perky is a great social leveller.

If you're an amateur musician, some of the more advanced packages such as the Microvox sampler will be genuinely useful if you want bass guitar sounds, but can't play bass, or would like a whole orchestra to perform in your front room.

On the other hand, you can still pay quite a lot of money (for instance, for some of the Atari ST packages) for a sampler which is of no musical use at all, mainly because you can't control the pitch of the sample in any musically meaningful way. So be warned.

With a little programming knowledge you should be able to incorporate sampled sounds into micro games of your own devising, and of course being able to do-it-yourself is handy if your taste runs to screams and explosions rather than more blood-curdling than the software industry is currently willing to provide. There are serious applications too - for speaking to the disabled or offering user feedback in industrial control applications where it's impossible to keep one eye on the micro's monitor.

The S900 offers eight-note polyphonic or multitimbral sampling and playback at around 16kHz response. Samples can be edited as regards tuning, audio envelope, and (with the new software) synth-like filtering, and you can save sounds to a built-in 3.5" disc drive; a large LCD display gives a fair idea of what's going on.

Maximum sampling time at telephone quality is around 19 seconds, so you can use the S900 for music, sound effects, or even entire pieces of vocals (this saves on having the backing singers do the chorus fifteen times - you just pay them to do it once, sample them, and trigger it off whenever you need it).

It takes around thirty seconds for the S900 to load a full disc of sounds (which may have up to a dozen or more sounds arranged in various different keyboard setups) but a Hard Disc option which will load any one of hundreds of sounds in seconds is on its way. For the drummer, the optional ASK-90 circuit board turns the S900 into a percussion sampler which can be played back from pads or tape clicks.

S900, AK73 Mother Keyboard, ASK-90 for the drummer and Version 2 software - at around £3000, this system represents the state of the sampler's art today.

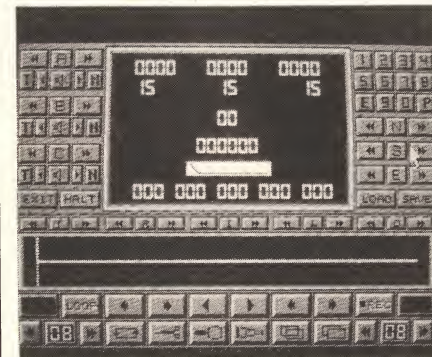
Sampling	11s at 16kHz 63s at 3kHz
Editing	Envelopes, tuning filters, MIDI assignment, dynamic filters (opt)
Ease of use	Fair
Price	£1800

Pro Sound Designer

Eidersoft Ltd

Unlike other samplers available for the ST, the Sound Designer interface gets plugged into the printer port. A nine volt battery is required as the printer port doesn't offer any power lines. Two jacks are present on the sampler. One for input the other for output. Boot up the software and hold your breath. Delightful graphics appear. The software not only looks good, it also performs well.

Insert a lead from the headphone socket



Pro-Sound's not just a pretty face - that straight line in the upper window gives a graphic read-out of the sample pattern

of your hi-fi to the input jack of the sampler, play your Motorhead record (or recordings of your voice, the scratching of finger against beard... in fact, any sound) and watch the waveform jitter and jive on the screen. Sounds may be sampled at rates between 3Khz and 30Khz. At 30Khz reproduction is near-perfect - little distortion and no hiss, but you only have 8 seconds before memory runs out (sample time is trebled if a 1040 is used). Admirable playback can be achieved with 8Khz samples (which can last a good 30 seconds). Sounds needn't be played back at the same rate they were sampled. It's great fun to sample someone with a deep voice at 10Khz and play it back at 15Khz or more.

There are two sections: the sound sampler and the added bonus of a sound chip editor. All functions are selected by clicking on icons. Pre or post-sampling options include reverse playback, cut, transparent copy, block copy, magnify, de-magnify, loop and alter record or playback speeds. Clever use of the editing (cut-and-paste) features can produce startling effects. For example,

sections of the sample may be transparently copied (merged) which results in great echo effects - unfortunately loss of volume occurs when merging. Samples and sounds created from the chip editor may be saved and loaded at leisure. Eidersoft also allow you to incorporate creations within your own programs and listings and examples are plentiful in a variety of languages.

Both home enthusiasts and professionals - especially since a Midi sampler and sequencer package, Pro Midi at £16.95, for use with Pro Sound is available - will find Pro Sound appealing. It has everything necessary for quality sound and effects production.

Sampling	8s at 30kHz, 30s at 8kHz
Editing	Comprehensive
Ease of use	Excellent
Price	£59.95

● Mark Jenkins

Next month...

...a Christmas extravaganza as we check out MIDI compatible keyboards. What they can do, how they sound, how much they cost, and which one you should be asking Santa for...

...PLUS the delayed final instalment of our MIDI Made Simple course and the introduction of our MIDI Panel of Experts.



Casio's CZ101: an old MIDI favourite with bags of third party support. Does your Christmas stocking deserve it? Or should you go for one of the flashier new contenders on the market? Check out next month's Buyers' Guide to find the right weapon in the sound wars.

Band in a box.

Michael Downey checks out an unassuming looking piece of kit that offers 32 note polyphony, eight sound patterns simultaneously, plus reverb - and all in glorious stereo.

If you have been following the music section in the last two issues of ACE you will know that, with the correct MIDI interface and software, it is possible to compose music on your micro and play it back through up to sixteen separate synthesizers simultaneously. This

may have captivated your imagination enough to enquire about the cost of buying sixteen synthesizers (I hope you were sitting down at the time), promptly putting the idea straight in the trash can and nipping off to your local software shop to console yourself in a new game. Enter the **Roland MT-32**.

This unassuming little black box could be the most useful acquisition ever made for those wishing to produce more than just a few pops and squeaks from their micro. The MT-32 is multi-timbral and has the ability to act like eight separate synthesizers over which a maximum of thirty-two notes can be played at any one time. Hence the name. The sounds (timbres) are made up of 'partials', of which there are 32, so that shouldn't

Conclusions

Coming up with some conclusions about the fast-moving world of sound sampling is pretty difficult, as some instrument or package is bound to be released every few weeks which could turn the whole scene on its head. However, depending on your exact needs, there are a few stand-out items around at the moment.

Fun and Games

Best to check out the Cheetah SpecDrum and AmDrum for drum enthusiasts. You could also hunt around for a second-hand Music Sales Commodore Sound Sampler if you're keen on silly noises, echo effects, and general horsing about. Right at the bottom of the scale you'll find a £1.99 package called Micro-Rhythm from Firebird Silver for the C64, which plays back sampled drum sounds and offers basic arrangement possibilities but not - hardly surprisingly at the price - the chance to do your own sampling.

Playing With Music

Again, the Music Sales Sound Sampler for the C64 which will store and replay short sounds and also offer echo and pitch shifting effects. It's great value for money at well under £100, but the proposed MIDI interface to make it more controllable never did appear.

Semi-Pro Music

There are a couple of sampler add-ons for micros which are just about usable for semi-pro music - the monophonic Microvox for the C64 being one example. But your best bet here is to invest in a MIDI interface for the C64, BBC, Amstrad or Spectrum (from EMR, XRI, Steinberg, Datel or others) plus some sequencing software and a MIDI sampler such as the Akai S612 (6-note polyphonic, loading from Quick Discs), now at £350 or so even less second-hand.

Audio Experimentation

A few sound samplers are set up more for audio demonstrations and experimentation than for music. Examples include the Barry Box for the BBC and Master Series, and to some extent the Eidersoft Pro Sound Designer for the Atari ST.

Serious Music

Serious samplers benefit from being controlled by a micro computer with sequencing software and a MIDI interface. Front runners are the Akai S900, the E-Mu Emax (16-note multitimbral, with or without keyboard, £2500), the Sequential Prophet 2002 Plus, or any one of a number of pro instruments available in keyboard or module form. Call Chromatix (01-229 2041) for more advice.

Tax Avoidance

Your accountant tells you that you've earned much too much money this year. It's March 31st - the new tax year starts in the morning! Quick! You gotta offload some of that spare cash! Nip down to Turnkey (Brent View Road, London NW1, 01-202 4366). Ask Dave Whittaker for a demo of the BIG Synclavier sampling system - you know, the one with the keyboard, the monitor, the quadruple Winchester hard disk drives, the built-in modem, the advanced music programming language, the polyphonic sampling and stereo output options. Write out a cheque for £100,000. Phew! That was a close one!

take you long to work out that to gain 32 note polyphony you must use simple sounds containing one partial only. The more complex, and interesting sounds can use up to 4 partials, reducing polyphony accordingly.

Also included, for good measure, are thirty sampled percussion sounds and a digital reverb to make the whole thing sound like you're playing in a large (or small) hall. All this for less than the cost of most modest synthesizers, £450 to be precise.

For your money you get an MT-32 power supply, one MIDI cable, two audio leads (suitable for connection to most hi-fi's), an owner's manual, a plastic card which lists the 128 preset timbres and two useful little booklets: "Guidebook to MIDI", for the novice, and "MT-32 MIDI Interpretation", for the programmer who would like to communicate more intimately with the MT-32's sound chip. Talking of sound chips, the MT-32's uses the same linear arithmetic (LA) chip as its famous big brother, the Roland D-50 digital synthesiser, which you may have heard on

certain Top 40 records and numerous TV adverts. All this means that the sound quality of the MT-32 is very professional.

The front panel contains a 20 character back-lit LCD and remarkably few (ten) switches and controls (well, control) for a machine that can do so much. This is because Roland have intended the MT-32 to be used as a simple preset synth expander with their home piano range of keyboards. On the back panel are the two audio outputs (stereo on the left and right), the power supply socket, the power on/off switch and, most important of all, the three MIDI connectors (IN, OUT, and THRU).

The front panel switches provide access to the eight synthesiser parts, which are set by default on MIDI channels 2 to 9, and the rhythm part which is set on MIDI channel 10. The 30 percussion sounds which form the rhythm part are assigned to different MIDI note numbers (see diagram) and respond to velocity for added expression. The rotary control is multi-functional and allows you to adjust the volume of each part individually, select one of the 128 preset sounds to be used by each part, adjust the overall volume (or master volume), select one of 10 reverb modes and tune the overall pitch of the machine.

By connecting the MIDI IN of the MT-32 to the OUT of a MIDI interface on your home micro and running suitably competent sequencing software that allows you to enter notes from the QWERTY keyboard or mouse, you will be able to produce complete musical compositions with very high quality

Complementary noises...

Although the Roland MT-32 is primarily aimed at a different market it could become the number one accessory for home micro users aspiring to be musical. There are other units on the market but none offer quite so much for so little. One worthy of mention, however, is the Yamaha TX81Z. Similarly priced at £399, it will also produce eight separate synth parts but only allows one note to be played at a time by each part. It uses Yamaha's respected FM synthesis method but does not contain any rhythm part or reverb. The sounds can, however, be programmed from the front panel and it would serve as an excellent complement to the MT-32 if more than eight synth parts were required simultaneously.



Spot the box...

The MT32 is already getting on the road - think about it, for the price of a Roland D50 synth you could get no less than **three** of the blighters. Anyone for 96 note polyphony? Roadrunner (pictured here) are obviously content with just one, for the moment. You can see it nestling back there beside the trusty ST. The band back up the Roland unit with an Iconix sequencer and a Casio CZ101. Graham Scott, speaking for the band, says 'We play mainly 50/60's r&r, but also more modern material. By combining the live sound of that period with the modern technology of MIDI, we are able to produce a distinctive quality live sound.' You can hear them at the Novotel computer show on the 21-23 November.

If you're stretching MIDI equipment to its limits on stage - or even just in your basement - ACE wants to hear from you. Send us a good b&w photo and tell us all about yourself. Nothing like a spot of free publicity, eh chaps?

sounds. These could then be recorded directly on to cassette with no further equipment needed. If you have even a basic keyboard technique, then a MIDI keyboard might be handy and can now be bought from as little as £100 or so.

All of the front panel's controls can be overridden by MIDI messages being sent from a computer. This means that, when a song or sequence is played back, each part can be programmed to revert to its original sound and volume level within the mix. What's more, aspects of the sound can be altered that are not possible from the front panel (such as adding vibrato and adjusting the stereo positioning of each part).

This all leads up to the subject of MIDI 'SysEx' commands. Inexperienced programmers may have to be content to wait for suitable editing software before embarking on their own synthesis - let's hope the software houses realise the potential market for this

product and produce some...pretty quick. The MT-32 warrants some sort of combined sequencing/sound editing software which

Thank you letter

The MT32 is selling so fast that even Roland weren't able to locate one in time for this review. Our thanks therefore to Argents of Denmark Street, London for the loan of aforesaid instrument at very short notice.

should be released for all the popular home computers. Meanwhile, for those with a thorough grounding in basic MIDI programming techniques, the 'MT-32 MIDI Implementation' booklet will be of great value as it lists all the variable parameters with their respective SysEx codes.

● Michael Downey



Roland's MT32 - small, unassuming, neat, but bound to be a big noise in future.

OUT OF THIS WORLD



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- Amstrad 'Smooth Scroll'.



Available on Spectrum, Amstrad and Commodore.



Commodore Amiga
PRICE (A500)
£499 inc VAT
 TV modulator not included

ART GRAPHICS

The Amiga offers the artist a range of 4096 colours. Typical art modes are: 320 dots wide x 200 lines high with 32 colours at once; 640 dots x 200 lines with 16 colours at once; or 320 dots x 200 lines and all 4096 colours available at once (though with some restrictions) in the Amiga's 'Hold-and-Modify' mode. A special monitor will offer you 400 lines per screen rather than the 200 above, and for video purposes you can extend the picture to the very edges of the screen, eliminating the border entirely.

PROCESSING POWER

As well as a 68000 central processor, every Amiga has a built-in blitter. The blitter is a chip designed to do repetitive, time consuming jobs far faster than the 68000 can: it's particularly good at combining graphic images, drawing lines and filling shapes.

DISK CAPACITY

The Amiga's disk drive is double-sided as standard, offering a hefty 880K formatted capacity.

GAMES GRAPHICS

The Amiga screen can be hardware-scrolled one pixel at a time either vertically or horizontally. The system's dedicated graphics chips also offer the games programmer eight 3-colour hardware sprites, four 15-colour sprites or a mixture of the two types. The Amiga's 'Copper' coprocessor lets you scroll separate screen windows in different directions, and 're-use' sprites so as to get many more than eight on screen at once.

SOUND

The Amiga's custom sound hardware gives it enormous musical and game-sound power. The four channels have fully definable waveforms, and can be coupled so as to produce amplitude- or frequency-modulated sounds – all this with very little processor effort. What's more the sound's stereo, with two channels each assigned to left and right.

Atari ST
PRICE (520 ST FM)
£299 inc VAT
 Plugs straight into TV

GAMES GRAPHICS

The ST has no hardware sprites. Vertical scrolling is possible in hardware, but horizontal scrolling has to be done in software – and that uses an enormous amount of processing power.

ART GRAPHICS

The ST artist can choose from a range of 512 colours. 'Shifter', the ST's video chip, can only manage two colour screen modes: 320 dots wide x 200 lines high with 16 colours at once, or 640 dots x 200 lines in 4 colours.

SOUND

The ST's primitive sound chip is a close relative of the AY chip used in the Amstrad CPC and Spectrum +2. Its three channels can only produce square waves, so any fancy harmonics, modulation etc have to be handled in software – at considerable cost in processing effort. On the plus side, the ST has a built-in MIDI interface making it a very attractive machine for well-equipped musicians.

More and more computer users are upgrading to 16-bit machines. Spectrum, Amstrad, and C64 users are moving up to Atari STs and Commodore Amigas in droves, with the new Acom Archimedes carrying others still further to the dizzying heights of 32-bit computing.

In the early days of the ST and Amiga, a lot of the buyers were 'propellor-heads' – the kind of techno-fiends who buy micro-chip kettles and talking cars out of a sheer love of gadgetry. Propellor-heads are never satisfied for long, and they've now moved on to the Archie (Archimedes) with at least one eye on the Next Big Thing (see box later in this article). For the rest of us, however, upgrading is rapidly becoming an essential consideration for anyone who wants to keep abreast of the latest software developments, let alone the attraction of a more powerful machine.

Most of us know what's on offer, but it's not enough to know which of the new machines you want – there's always the nagging doubt as to whether you *should* buy it. For musicians or artists the choice may be fairly clear, but for hardened games players, or those of us wanting all-round computer entertainment, the upgrade business is a good deal more complicated. Will your new investment be so much scrap plastic in a year's time? Will software houses really come up with the goods? Will there be lots of juicy add-ons for it?

One thing's obvious – you don't want to shell out a fortune for a machine and find out that no-one else is buying it. But it's not just a question of which machine sells well in the UK. Despite the great success of the ST in Britain, in the US the Amiga is now well ahead in sales. In Germany (an ST stronghold), the Amiga is also taking an increasing market share; in Scandinavia, ST sales are rumoured to be running at a poor fifth of the Amiga's.

So what?, you may say, but foreign sales can have a strong long-term effect on software availability – remember the Spectrum vs Commodore 64 battle, where US imports of games slowly gave the 64 parity with the UK machine despite its higher price? Even a high price in the UK doesn't necessarily spell death for a micro – the BBC machine (in many ways an early equivalent of the Archimedes) attracted reasonable games software support in the early days and an enormous number of peripherals.

The fact is that both the Amiga and ST are now firmly in place, and even the pricey Archimedes has a lot going for it. Certainly neither the ST or the new Commodore is going to disappear tomorrow, so you aren't going to be left with an abandoned, unsupported or superseded machine if you take the plunge now. On these pages you'll find all the information you need to help you make that vital decision.

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SPECTRUM 7.95
COMMODORE 8.95
AMSTRAD 8.95

Archimedes PRICE (A305) £804 inc VAT

Has mono video signal and RGB, but you'll need a third-party modulator to use an Archie with a standard TV

GAME GRAPHICS

The Archie has only one hardware sprite and no special games hardware as such. This really doesn't matter much, given the machine's enormous processing power.

ART GRAPHICS

The Archie has a palette of 4096 colours. A typical art mode would be 320 dots x 256 lines with 256 colours on screen at once – much more useful than the Amiga's restricted 'Hold-and-Modify' mode – but you can get higher resolution than that if your monitor's up to it.

SOUND

Although the Archie has sixteen sound channels arranged as eight stereo pairs, it takes a great deal of processor time and programming effort to get any sort of sound out of them at all. The hardware also has a narrow range – only six octaves – so this is definitely Archie's weak spot.

PROCESSING POWER

The Archie uses Acorn's very own ARM chip as its central processor. The ARM can equal the Amiga's blitter on any function you could name, beats it easily at most tasks and runs rings round the poor old 68000.

DISK CAPACITY

The Archie comes with a double-sided drive as standard, packing 800K onto a disk.

Industry Opinions



US GOLD: "All our major releases will go on to the ST. We're developing *California Games* and *Gauntlet* for the Amiga at the moment, but we're not converting everything. We'll see how sales go. We've no plans for the Archimedes at present."



OCEAN Software Manager, Gary Bracey: "We are committing ourselves heavily to the 16-bit machines. The ST's our primary commitment, but the Amiga will be getting about 80% of the stuff that the ST does. As for the Archimedes, it will need more of a market presence before we will support it."



MIRRORSOFT Commercial Manager Bernard Grant: "You might say we pioneered 16-bit software in this country with product from Mindscape, and Spectrum Holobyte. We'll be putting everything on the ST and the Amiga. We've got no plans at the moment for the Archimedes."



RAINBIRD spokesman Steve Perry was enthusiastic about the new machines and adamant that the company would NOT simply be porting ST conversions straight over to the Amiga. 'Dick Special was developed on the Amiga and will be converted for the ST. We also have plans for the Archimedes, but of course it depends on the size of the market. We expect it to behave a little like the Amiga did at first – starting slowly and developing over a period of time.'



ACTIVISION ambassador Andy Wright: "We'll be supporting the ST particularly this Christmas, but of course we have lots of stuff for the Amiga as well. We'd be looking to support the Archimedes, depending on how it sells this Christmas."

THE NEXT BIG THING

Let's face it: if you want to impress your friends you'll need something a bit more impressive than an ST or Amiga these days. The Archie's the hip machine with techno-freaks at the moment, but devotees of processor power are always on the look-out for newer, shinier technology.

The problem is memory: the 16-bit boom has only been possible because of the drastic fall in the price of RAM chips, but cheap dynamic RAM (DRAM) is slow stuff. The Archie's ARM relies for speed on some very clever fine-tuning of cheap DRAM, but the memory really can't be pushed much further.

To get more processor power into a home micro, manufacturers will either have to find a faster form of cheap memory – at current prices a 512K fast-RAM machine would miss the £1000-and-under bracket by a mile – or break down conventional processor/memory barriers. Atari certainly know which way they're going: next year they'll be bringing out an ST-compatible machine based around Immos's revolutionary Transputer, a chip which combines processing and RAM in one neat little package.

Transputers are the gateway to parallel processing – a group of processors working as a team, with many times the processing power an individual chip could offer. A single Transputer isn't the most powerful thing in the world, but put several of them together and you've got a machine with real clout.

WHAT USE ARE TECH SPECS ANYWAY?

From the diagrams you can see how the machines shape up technically, but this is only half the story. Unless you're a very heavy duty programmer indeed, you'll be relying on the software you buy to use the power of your machine. This is a particular problem on the games side of things: the Amiga's blitter and copper, for example, are no use to you at all if you can't find programs that put them to work.

The main worry with the Archimedes is whether there'll be very many games written for it full stop. The Amiga problem is more subtle. If you forget about its blitter, copper, scrolling and sprites, the Amiga looks (to the programmer) just like an ST. The adjustments needed to make an ST program run on an Amiga are very slight indeed, and few programmers bother modifying their games during conversion to use the Amiga's extra hardware facilities.

There's nowhere near the same problem with art and music programs – one good art program could well be all you'll ever need, and you certainly won't be buying new music software every week – but for the games player it's important to buy a machine that's going to get plenty of support – and that means a machine lots of other people are going to buy.

Even more than the price, support is the problem with the Archimedes as a games machine. Of course, you may prefer a few very impressive games to a whole load of quite good ones: after all, if you really wanted a machine with great software support you'd buy a Spectrum!

The ST on the other hand has price and support on its side. In the UK it's the main development machine for 16-bit games: very few software houses produce Amiga games as anything other than ST by-products, and there's no sign of this changing in the immediate future.

The Amiga's a sort of middle way: if the ST wins the sales battle then you can expect

The ACE Upgrade Checklist

Still stuck? Still can't decide which juicy byte-basher to plump for? We can't make the decision for you, but we have come up with the following checklist that may help.

All you have to do is run down through the list checking the different uses for your new computer. When you reach one that appeals to you, underline the three numbers in columns opposite your choice, then continue down the list. Each column relates to one of the machines featured in this article.

When you've finished, work your way down each column in turn, adding up the numbers that are underlined until you have a total for each machine, which you should enter in the space provided. The machine with the highest total deserves your most serious consideration. Now all you've got to do is work out whether you can afford it!

	Archimedes	Amiga	Atari ST
Are you interested in:			
Buying more than four new games titles per month:	0	4	6
Using your micro for educational purposes	4	1	1
Impressing your friends with your new machine	6	4	2
Using MIDI instruments	0	1	6
Composing music using the computer's internal sound chip only	1	6	2
Adventure software	0	3	3
Arcade action software	1	4	5
Owning a state-of-the-art machine	6	3	1
Immense processing power	6	3	1
Paintbox art programs	4	6	3
Business software (exc. w.processing)	1	2	4
Word processing	1	3	2
Programming in BASIC	6	3	2
TOTAL			

an awful lot of uninspired conversions, but that's a lot better than nothing; if the Amiga itself wins you should soon be seeing some very impressive games indeed; and if the Archie wins - well, everyone will be rather surprised.

But there's another side to the Amiga that the ST can't match, and it could prove decisive in the battle for support. Already,

coin op manufacturers are turning to the Amiga as a cheap source of graphics power. Mastertronic's new coin-op subsidiary Arcadia is based on machines which are, internally, Amigas. Soon Amiga owners will be able to play not just coin-op conversions but the actual coin-op

games themselves. Since these games are being developed directly on Amigas and need to be of arcade quality, those special hardware features should be pushed to their limits.

There's every chance that we'll see both arcade machines and cheaper home computers based on the Archie's own innards. Whether Acorn themselves will come up with a machine priced for the home market is still uncertain: they tried this with the BBC Micro and the resulting machine - the Electron - was none too successful. But the relevant chips are available to other companies right now, they're very powerful, and they're cheap too. Any such spin-off would dramatically increase Archie's chances of software support, so keep watching the skies.

POWERFUL STUFF

This graph gives some idea of the relative power of the new machines, with a 4MHz Z80 (as used in the Spectrum) for comparison. For the technically minded: the figures show the theoretical maximum sprite area (in memory terms) that each machine can put on the screen in one frame (a fiftieth of a second). The 'dumb' Archie figure includes looping time and is based on a very inefficient algorithm, while all the other examples assume that looping time is negligible. The figures ignore DMA time, and non-sequential access delays on the Archie's ARM. (The latter would make very little difference to the 'smart' example.)

Spectrum (Z80) 1.7K

Atari ST (68000) 12.0K

Amiga (Blitter) 17.9K

Archimedes (ARM)
dumb 37.6K

Archimedes
'smart' 86.5K

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901226 Basic ROM	10.00
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All the above prices include VAT but please enclose a further £1.50 post and packing on all component orders.

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★ For quotes on computers not listed or on any component, telephone 0276 66266. (Quoting ACE/127).

★ To send us your micro for repair, mail it securely packed, accompanied by cheque, postal order (made out to Verran Micro Maintenance Limited) or quote your Access or Barclaycard number. And to obtain your special discount quote ACE/127.

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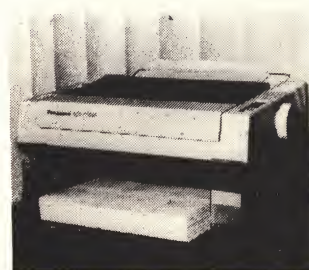
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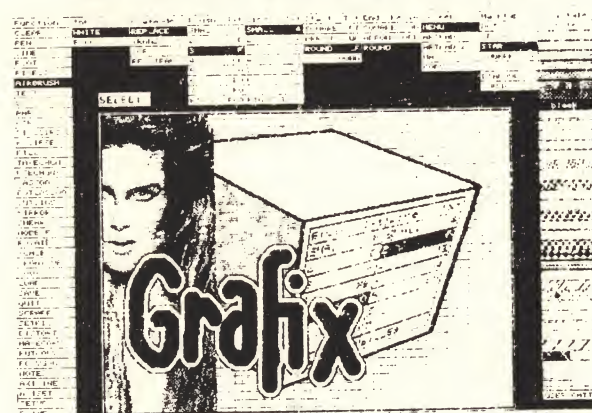
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GRAFIX has been written to outperform its rivals both in speed and ease of use. Perspective and isometric drawings are supported by the PLINE and AXILINE functions. An infinite number of brush shapes, spray patterns and erasers are available.

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GRAFIX will run on all ST's with mono monitors and is Blitter compatible.

£16.50

It's the biggest show of the year – and the big guns were all there. ACE graphics reporter Brian Larkman went along to see what was on show to set your eyeballs a-tingling.

PCW SHOW

Pictures at an Exhibition



Deluxe Paint II zooms in on a Digipic-produced portrait.



Ray-traced 3D ACE logo created using the power of Sculpt 3D

Commodore Village – Commodore Museum?

A bit of a shock really; it was me up there, frame-grabbed and digitised on screen. Walking round the PCW show at Olympia there are so many machines flashing their VDU eyes at you that after a while you have to blot out those of little interest and concentrate on the choice material – but when the visual banality is provided by your own face – well you just have to take notice!

Three of the sexier machines at the show have now got 'real-time' frame grabbers – Amiga, Archimedes and Atari ST – and the one on the Precision stand (Digipic for the Amiga) had the cheek to be digitising us punters. In a strange way this contributed to the peculiarly museum-like atmosphere of Commodore Village. Walking into it reminded me of nothing less than a childhood visit to the Science Museum Childrens' Section on a weekday morning; reverential, almost hushed tones and Victorian museum embellishments, but peppered with what were for the time being only 'high-tech' interactive toys. This feeling was helped by Commodore's display of their historic machines – including an Amiga 1000 in a cabinet, like a real museum piece.

As well as Eric Graham's **Sculpt 3D** (more of this in a moment) the enterprising Amiga Centre Scotland (031-557-4242) import its previous incarnation **Ray Tracer**. This can create sphere-based (as opposed to Sculpt's triangulated) 3D structures – like the famous juggler – and then ray trace them. If you want to know who Ray Tracer is, look in the box! At £11 this must be the greatest Amiga graphics bargain yet – though be warned, it uses the draggy CLI rather than the much easier Intuition interface. That's why it's cheap.

Other interesting and relatively new releases are **Digipaint** from NewTec (£60 from Busbyte – see review on page 47) **Videoscape Animator 3D** (£200 from Busbyte – a 3D modeller and animator from Aegis), **Animator Apprentice** (£195 from Busbyte – a cartoon animator), **Forms in Flight** (£60 from Amiga Centre – another 3D modeller), **Express Paint** (£58 Amiga Centre – sort of desktop graphics with good text handling including text file fill into any area just like pattern fill) **Butcher** (£28 Amiga Centre – versatile graphics utilities), **AIRT** (£55 Busbyte – icon-driven graphics programming) and **Deluxe Video 1.2**. (£90 Busbyte – full screen high-res videos). Busbyte (0727 56005) were

also showing the interactive **Genlock**. The star of the show, though, had to be **Sculpt 3D** published by Byte by Byte.

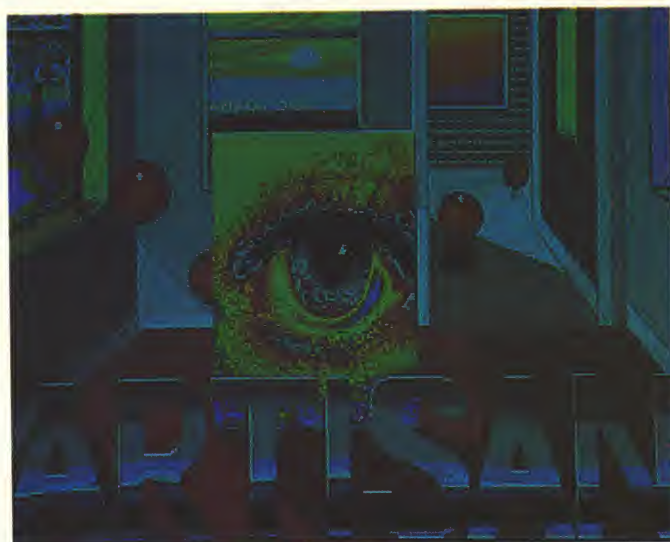
Sculpt is an "...interactive solid modelling editor". It provides a very comprehensive set of tools for creating and manipulating 3D object-orientated graphics. Using it you can

Digitising

Most digitisers for home computers digitise an image quite slowly. This allows the scan to pick up the maximum amount of detail and convert the analogue signal into a digitised one. If it is to be in real colour three scans are necessary – one each for the red, green and blue components of the picture. This inevitably takes some time. Probably the best cheap system that uses this method is **Digi-View** by NewTec for the Amiga. This can produce a full colour picture of great accuracy.

For the animation however, at least twenty frames per second need to be sampled (digitised) if the movement of the object is to be smooth. Therefore, digitising has to be in real-time without any delay between the samples. Real-time sampling has to be in black and white because colour sampling takes too long.

ShackSoft



That there eye appears in that there room by virtue of Clares Artisan, looking likely to be the first graphics package available for the Archimedes



Artisan again - this time a very pretty rural scene, with the same scene inset.

construct a computer simulation of any combination of objects from the editor's specs to Leeds Town Hall, provided you have enough memory. What makes *Sculpt* really special however is the ray tracing software that allows you to render the objects realistically in full colour from any position and with whatever lighting you choose, using any of the Amiga's modes.

The results are astonishing: images are created that, allowing for resolution, are comparable with those produced by the really expensive, high powered computer graphics industry 'render engines'. It can do this because a) the Amiga can display 4096 colours at once and b) ray tracing is the same method used on the high powered machines - there is no functional difference except power and hence speed of rendering.

Although *Sculpt* 3D is not in itself capable of animating an object the ability to use batch processing of a series of previously set-up scenes allows the long-winded ray-tracing operations to be taken care of with the

computer unattended or multi-tasking another application. This means that lots of detailed frames of an animation can be drawn one after the other, automatically. These can later be delta compressed, stored in a frame buffer and displayed as an animation by screen-switching - the method used for Juggler.

Sculpt 3D represents an important step for the Amiga toward really professional image creation in a form of which no other unexpanded PC is capable. And it's only £69!

Underneath the Archies

In time Acorn's Archimedes will probably have similar software, but at present there is not much in the way of an ordinary paintbox available. Clares (0606 48511) will probably be first with its *Artisan* program, weighing in at £39.95. It was on show at the Acorn stand right next to the *Zarch* demo - so it was pretty difficult to get close. But what was visible looked very promising. As well as the usual features it can switch the brush colours to produce stencils and - if it can be made to fit into 512K - should be able to fill an irregular shape with a rectangular brush, i.e. distort a rectangular piece cut from the screen into any shape. This would result in a reasonable simulation of - for example - a flat image wrapped round a sphere.

AMS are working on *Finesse Paint* and though the version at the show was rudimentary, what they have looked very smooth acting. Unlike *Deluxe Paint 2* for instance, brush rotation is in real time; and though it's a bit of a gimmick I also like the fading menus. You Archie owners will probably see it early in '88 (Both of you.)

Hopefully, there will also be some animation packages available in '88 a la *Animator* or *Deluxe Video*. No sign at Olympia though.

What Archie did have at the show was a Watford digitiser. It will work in real-time - 50 frames per second - and play back at 20. Only B&W of course but presumably with the right software and RGB filters colour would be possible, and with Archie's 256 colours and high resolution nice things could

result. If NewTek can make a good paintbox out of the Amiga's awkward HAM mode something really good could be done with the Archimedes.

Atari Market

Yet more digitising at Start Systems (0304 369364) with the *Silicon Animation Machine (SAM)* for the Atari ST. Like *Digipic* and *Watford*, SAM provides real time digitising, capturing images from most video sources at 25 frames per second. On a 4 meg ST, 122 frames can be stored, allowing detailed animated sequences up to 8 seconds long to be played back and mixed into other animations. Only in B&W though. Also from Silicon Solutions was the *GENE* professional Genlock providing much the same facilities as the Interactive one mentioned above.

Eldersoft (0706 852647) were showing an exciting piece of software in Atari World called *Quantum Paintbox* (£19.95). With this, 4096 colours can be generated on screen at once - well, 3375 on an Atari monitor. It works by creating 8 palettes which can be positioned to control any horizontal slice of the screen - quite how is not yet clear. All I can say now is that it is amazing to see more than 16 colours on an ST. The software seems to have most of the usual drawing functions plus colour cycling with each palette independently, colourising of B&W images and it will accept most ST files (.NEO and .pic) for colour enhancement. It also includes a "...Delta compression frame buffer... allowing hundreds of frames to be stored on a 1040." Now if all the features of this software could be used in conjunction with a digitiser....! Full review coming real soon now.

Once again, as in the Commodore Village, the most exciting offering in Atari World was a 3D solid modelling editor and animator, shown by Electric Distribution (0954 61258). *Cyber Studio* by Antic (£89.95) is based on CAD-3D, an earlier three dimensional design program for the ST. It provides many of the facilities of *Sculpt* 3D but without ray tracing as a final means of rendering the image. Instead, the package offers an excellent range of animation facilities via a

motion-control desk accessory and a complete animation-control language called *Cybermate*. Using these it is possible to animate a CAD-3D object in front of Degas or Neochrome images complete with sound effects. Objects can be dissolved in and out and mixed, delta-compressed and played back in real time, and viewed with StereoTek glasses. A very impressive product. Also available are 'parts' disks for Architectural design (house bits), Future Design (rockets and robots), 3D Fonts and - amazingly - Human Design!

Olympia Let Down

Overall this year's show was a little disappointing; I was expecting much more new graphics hard- and software from the Atari camp and lots more excitement from Commodore Amiga. Nevertheless, Atari World certainly had lots going for it. That area felt a bit like the first Novotel Amstrad show; a market place with lots of people trying to sell their little bits of software into a niche in the market. A good example of this was *Animatic* from Soft Bits (01 836 2533), a nice little graphics utility designed to produce small animated frames with Fast Basic. But there is no doubt that graphically much of the current innovation is going into games. This is a great pity as the ST and especially the Mega ST have great potential - *Quantum Paintbox* and *Cyber Studio* prove it.

8 Bits Missing the future?

The biggest surprise of the show was the total lack of support for 8 bit machines. Only AMS seemed to have anything other than the sexy 16 bitters running graphics software and absolutely no-one had anything new. Looks like *Advanced Art Studio* is the best that the Spectrum, C64 and CPC owners can hope for in the future!

And speaking of the future, what comes next? I will stick my neck out here and declare an interest in video. All the components are there for a simple animation on video - Desktop Video if you like.... A huge proportion of computer owners also own/rent a VCR... most people have an art/paintbox program... and Animation Software is readily available and easy to operate... Realtime digitisers are rapidly dropping in price... B&W video cameras are quite cheap to make... Even on 0.5 meg machines, compression allows lots of digitised frames to be stored and played back. Modulators are available for most machines so connection to video should be straightforward...

All it needs is an Alan Sugar to put all this together into a simple-to-operate package with one lead and coherent marketing strategy for, say, £300, and home 'desktop' video is born.



PAINT BOXING

DELUXE PAINT 2 and DIGIPAIN - friends or foes? Brian Larkman makes them play together

"heaven is free from clouds, but of all colours seems to be..."

Lord Byron

Byron in a computer mag! But he's right, you know - for a graphic artist, the range of colours available on the Amiga is heavenly. Having had to make do with a palette of 2 or 4 from a range of 8,16 or at best 27 colours on the 8 bit machines I had been using, the chance of 32 from the staggering 4000 hues that *Deluxe Paint 2* on the Amiga offers has indeed been bliss. Now to make me even more ecstatic NewTek have provided *Digipaint*, allowing all 4000 to be on screen at once using the Amig's HAM - hold and modify - mode.

Digipaint is one of the first of a new generation of 'paintbox' programs for the Amiga. It provides the full palette of 4096 colours and a range of facilities normally only found on dedicated graphics workstations costing 100 times as much. Nevertheless, there are some limitations to *Digipaint* - mostly resulting from the nature of the HAM mode itself. Anyone expecting drawing and transformation functions similar to those in *Deluxe Paint* will be disappointed, but as we shall see *Digipaint* is very different from other drawing



Some of the amazing effects you can get by combining DPaint, Digipaint and a colour digitiser.

programs and is at its best when used in conjunction with *Deluxe paint 2* and a digitiser.

To show off *Digipaint*'s unique features and the way the two D-Paints, *Digi-* and *Deluxe*, 'mesh' together I shall describe the process involved in producing the illustrations.

The first stage in producing any piece of artwork is the background. *Digipaint* is capable of producing the most exquisite graduated shading, giving the effect of a landscape fading into the distance; but it

Output

There is one big problem with graphics work of the kind described here; what you do with it when you've finished work on the screen. How do you output your masterpiece? This is a problem that could inhibit the development of fully featured software for the current generation of graphics-oriented machines. In conversation with the designer of the new AMS *Finesse* paint package for the Archimedes I discovered that they were planning to provide only 16 colours even though 256 on-screen were possible - because of the problem of how to output the result. Hopefully they have changed their minds but you can see their point. Apart from taking photographic screen-shots (often a rather hit or miss affair) there is still no cheap and easy way to reproduce properly all of the subtleties that are now possible on screen. Until the image display technology catches up with the image production technology in terms of price, VCR's are going to fill the gap. What we need now is a really cheap VHS editing suite!



To create the folded chequerboard:

1. Make a simple check pattern
2. Give it perspective foreshortening and then distortion in Deluxe Paint, using 2 colours from 32
3. To enhance the perspective, transfer the whole picture into DigiPaint, saved as a brush, then paste it down with Shaded Mode selected
4. A gradual transition from the brush colour to the background colour in either or all directions from a 'highlight' is possible by selecting with a simple gadget

cannot rival Deluxe P when it comes to creating perspective patterns and fills, or transformations and distortions of shape.

To create the folded chequerboard I made a simple check pattern, gave it perspective foreshortening and then distorted it in Deluxe P - all this using a mere two colours from 32. C. To enhance the perspective I transferred the whole picture into Digi P saved as a brush then pasted it down with Shaded Mode Selected. This mode allows

4000 Colours on Screen!

The basis of this apparent magic is the ability of the Amiga to produce HAM - 'hold and modify' - screens. As a HAM display is produced, each pixel may be held momentarily and the value of one of its three primary colours changed. Other words each pixel can be a different colour from its neighbour and from all other pixels, up to the maximum of 4096 hues on screen at once. The potential for highly coloured screens provided by this ability to modify colours is really great, but until recently only those who could afford a digitiser or understand the Amiga ROM Kernel Reference Manuals had any chance of creating their own HAM screens.

you to produce a gradual transition from the brush colour to the background colour in either direction or in all directions from a 'highlight' selected with a simple gadget.

The Shaded Mode works with most of DigiPaint's tools and functions and allows some very delicate effects, including the clouds (with the airbrush) and the balls/bubbles (with the circle-fill). For more complex shapes, however, Deluxe P is much more versatile, allowing rotation, bending, stretching etc. Basic, unshaded elements produced this way can then be transferred to DigiPaint.

The bubbles utilise another mode - Blend - which gives the effect of transparency by averaging the colour of a brush with the colour of the area beneath it. In a similar way (with practice) it is possible to use the other Modes to produce a whole range of effects including colourising black and white images like the digitised picture of the model above.

Because DigiPaint uses all of the Amiga's palette it is possible to have several Deluxe Paint pictures or digitised 'screen-grabs' on screen at once, even if they have different palettes. The 'boy's bedroom' is made up of a number of images, some from full-colour digitised images, some Deluxe Paintings, and some objects produced using Sculpt 3D, all manipulated to give the illusion of depth. To be of any real use to a graphic artist a paint program must be able to mix together images from a range of sources like this to produce what is known as Photo-montage; DigiPaint is the first to allow this on a relatively cheap PC.

Deluxe Paint 2, DigiPaint and Digi-View (NewTek's inexpensive digitiser system)

together would make a remarkable package providing facilities unobtainable on any other PC. The weaknesses of Deluxe Paint 2 are the strengths of DigiPaint, and vice-versa.

Photo-montage

The process of computerised photo-montage on the Amiga is really simple using DigiPaint, but very versatile because of the way that the Modes work with other functions. Any image on screen can be copied to a Swap storage area, which is in effect a screen behind the visible one. Any new image can now be loaded onto the front screen. Using any ready-made or captured brush, the front screen can be "rubbed through" revealing the picture below. If Blend or Tint or Shading is in operation (or any Mode) these will affect the quality of the image that is revealed. With this technique some quite remarkably sophisticated photo-montage is possible.

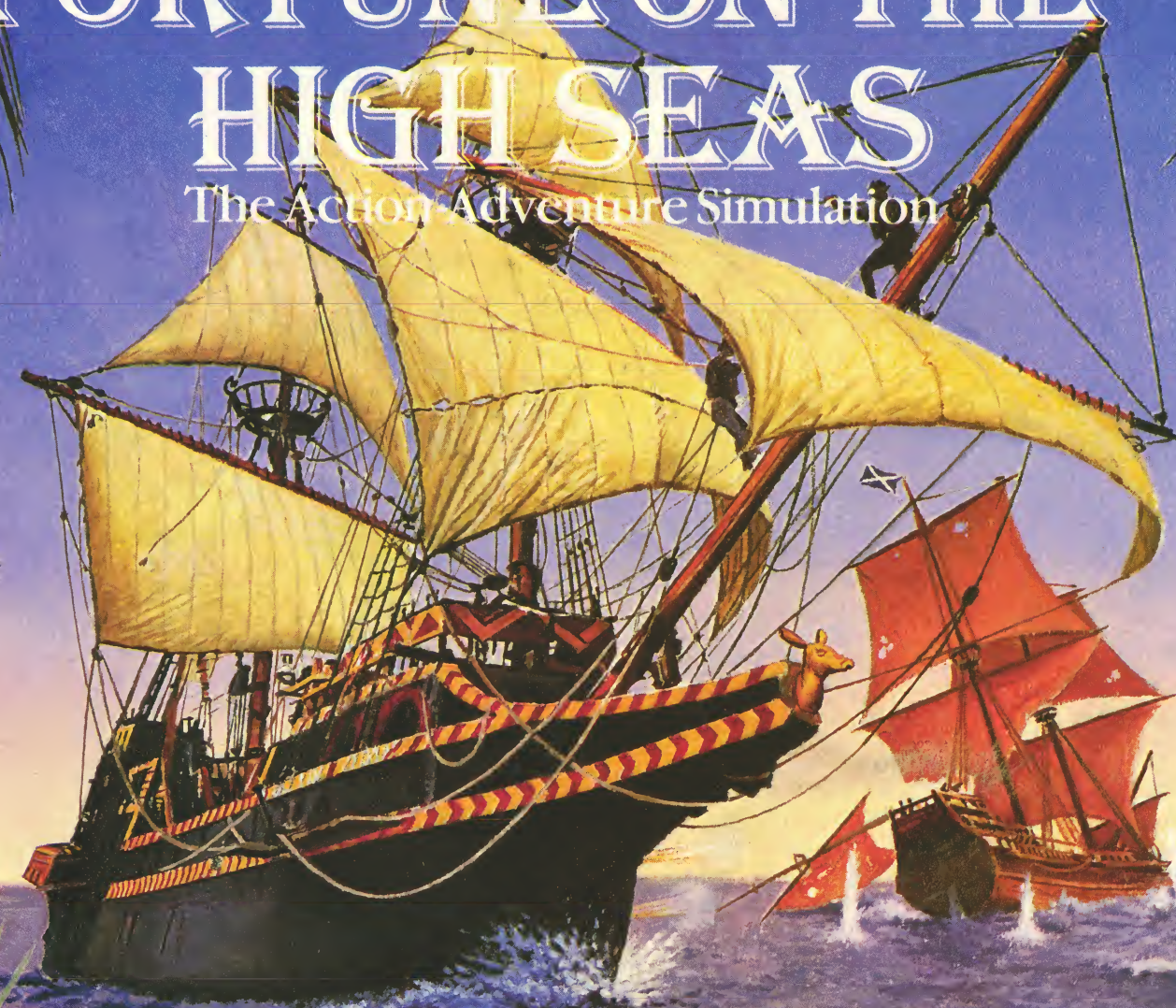
DIGIPAINT £59.95
NewTek
UK Distributors: Hi-Voltage,
53-59 High Street, Croydon,
Surrey
Tel. 01-681 3022

DELUXE PAINT 2 £69.95
Electronic Arts
Langley Business Centre,
Langley, Bucks.
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2 INTO THE COMPARENT CALM OF THE WHITE HOUSE BURSTS THE MANIC DR. MEGALOMANN. "STEP DOWN MR PRESIDENT, SUBMIT TO MY RULE OR TODAY AMERICA WILL KNOW A PLAGUE FROM WHICH DEATH WILL SEEM A HAPPY RELEASE".

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THE DOOM

TUBE OF DR. MEGALOMANN

SCREEN TEST

The PIC chart explained

A new system takes a bit of getting used to, so we've cooked up some ratings for a fictional game, *Standard Issue Scrolling Coin-Op Conversion* to help you along. You know the kind of thing; good scrolling, fast and noisy action, picking up extra weapons. Now check out the ACE treatment this game gets.

VISUAL EFFECTS ■■■■
Nice scrolling and the sprites are great

AUDIO ■■■■
The tune's good but the FX are dull

IQ FACTOR ■■■■
Shoot first, think later

FUN FACTOR ■■■■
Lovely controls, but sudden deaths are frustrating

PREDICTED INTEREST ■■■■
Frustration means your interest peaks early

VISUAL: What does the game look like? The more of these squares that have turned white, the higher the game's visual score is. Grey squares mean jerky animation, flickering sprites, colour clashes or a badly adjusted monitor.

AUDIO: How does the game sound? Are the in-game effects mighty booms and piercing screeches, or just puny blips? Do you want an LP of the title music, or would you prefer a pair of earplugs? Does that digitised speech say "Missile launched" or is it more like "Ngissiyee lauged"?

IQ FACTOR: How much thought does the game demand? Is it an epic of strategic planning, or a mindless shoot-em-up? A low rating here doesn't mean the game's bad - but don't expect it to tax your grey matter too much.

FUN FACTOR: Is it playable, amusing, enjoyable? Does it make you feel like you want 'just one more go'? And then another? Can you go into a darkened room and have a good time with this game? If so, then it's got a high Fun Factor. Expect higher ratings for pure arcade action than for games based on theology books; but games requiring thought can still do well here.

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PREDICTED INTEREST CURVE, or PIC for short. One look will give an instant idea of the game in question. The higher the curve, the more of your attention the game holds at any one time: the top of the box means total obsession, while the bottom means complete and utter indifference. In our fictional shoot-em-up here those graphics mean you'll be pretty impressed after a minute. You're even keener after an hour, thanks to those nice controls. But frustration at those sudden deaths has taken the edge off this by the end of the first day, and after a week the lack of depth is starting to show as well. By a month you've seen just about everything the game has to offer and want a new challenge, but the playability and great graphics mean you'll still be loading it up occasionally in a year's time.

ACE RATING is out of a possible 1000 and is directly related to the area underneath the Predicted Interest Curve. Obviously, the higher the score - the better the game. Games which are ACE Rated over 900 are really hot stuff - see Thundercats or Zarch for examples.

OGRE

ORIGIN SYSTEMS go to war

SET in the 21st century, this one or two player wargame is an adaptation from the board game by Steve Jackson (he of *Autoduel* fame.) The player takes charge of the defending forces and attempts to stop the monster war machine, the Ogre.

The game display consists of the playing area (made up of a 15x21 hexagonal map) taking up the majority of the screen with a

right hand strip showing any relevant information. The player controls the sequence of play by means of menus that appear in this column, while the actual movement and firing of the pieces is selected and carried out on the playing area.

The Ogre is controlled by the computer in the single player option and its prime objective is to destroy the defending player's

then the battle commences. The Ogre makes its appearance at the bottom of the map and works its way upwards toward the player's Command Post, taking into account the distribution of the defending forces and the terrain. Once the Ogre has moved, the fire phase is initiated and if any defending pieces are within range, the Ogre attacks. Then the player gets to move his forces and attempts to make a strike against the Ogre. If the player has any Ground Effect Vehicles then he gets an additional chance to move the G.E.V.s at the end of the firing phase.

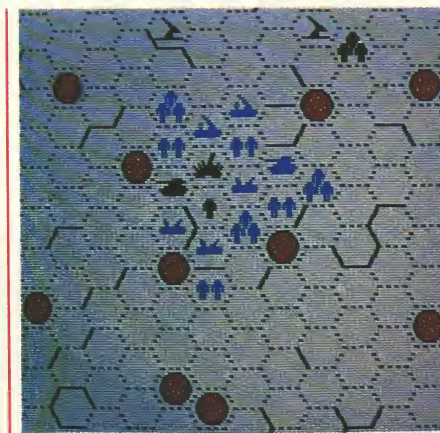
Facilities to enable the player to design the battlefields and choose the effective strength of the Ogre add depth to what is essentially a wargame for beginners. The game is limited though because in the single

player option the chance to play the part of the Ogre is denied. The fact that there is only ever one enemy piece (formidable as it may be) on the board will leave the competent strategist with the feeling that his tactical abilities are not being stretched, and he will soon get bored with it.

● Andy Smith

Kill-by-numbers

Ogre comes very close to putting a board wargame into your computer. The display, the playing area and the sequence of phases all combine to give the player the feeling that the computer is handling all the tedious parts of a board wargame while allowing the player to concentrate on the tactical side of things.



Your chance to strike back, move your forces into position and hope your combined fire power will slow the Ogre down.

IBM PC Version

Very similar to the other versions, despite the colour limitations of the PC. Cursor control is jerky but not enough to detract from the game. The game runs as fast if not faster than the Amiga version.

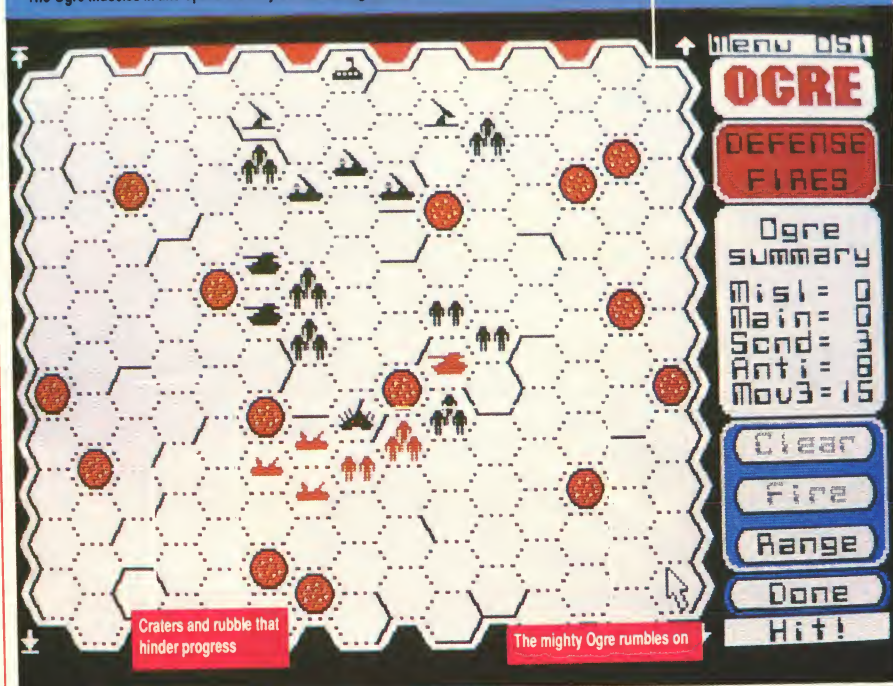
C64 Version

Surprisingly similar to the Amiga version, with most of the main features present. Slower and not as colourful as the Amiga version but just as playable.

Ogre! - hide yourself.

The Ogre muscled in and opens fire on your weakening forces.

You'll need strong tactics to protect your Command Post.



Craters and rubble that hinder progress

The mighty Ogre rumbles on

BULLWHIPS are all very well, but most people would like something a bit meaner against venomous snakes and hordes of kill-crazy cultists. Not swashbuckling archaeologist Indiana Jones though: he'll belt his way through almost anything to wrest the sacred Sankara Stone from the hands of the bad guys. Just as well really, because with things the way they are he'll have to.

The bad guys in question are thuggees - worshippers of the death goddess Kali - and they're a nasty lot. They've enslaved local children to work their mines for gems, so you (as Indy) spend the first of the game's three levels freeing kids. The action here takes place in a maze of platforms, ladders and conveyor belts displayed in a rather tricky 3D. You can get around using the ladders and conveyors, take short cuts by using your whip to swing across gaps, or leap down onto lower platforms once you've learned the layout of the place.

RELEASE BOX

C64/128	£9.99cs, £14.99dk	REVIEWED
SPEC	£8.99cs	NOV 87
AMS	£9.99cs, £14.99dk	REVIEWED
ATARI ST	£24.99dk	NOV 87

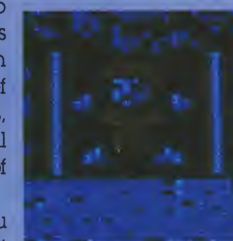
INDIANA JONES AND THE TEMPLE OF DOOM

US GOLD follow Indy underground

whip and keeping your car on the rails. The latter's harder than it sounds: you'll have to lean to one side or the other to change tracks at junctions so as to avoid dead ends or broken rails. Some rapid changes of direction are needed in places, but a little trial and error will soon get you safely to the end of the run and into the Temple.

After yet more loading you finally catch up with that Sankara Stone, though there's more whip work on snakes, guards and some very tricky gaps before you can get hold of it. The

strange forced perspective here takes a bit of getting used to, but this shouldn't cause too



many gameplay problems. Of course, you only have the lives you've brought through from the earlier stages so exploration takes a great deal of loading time. Once you've got the Sankara you'll have to go round the three levels twice more to get its companion stones, before tackling the game finale.

Overall it's appealing stuff with chunky, pleasant graphics, but the gameplay's a bit lightweight in parts - level 2 is particularly

easy - and a day's play should show you most of the variety the game has to offer.

● Andy Wilton

CPC Version

Fewer colours and 'rollerskating' sprites make the CPC graphics look a little rough, and the scrolling isn't perfect either. It's much harder to stun thuggees with your whip, but this is more a frustration than a challenge.

VISUAL EFFECTS

Simple representation of pieces

AUDIO

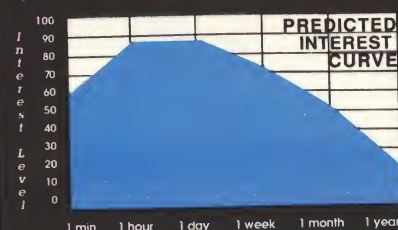
Sparse effects add little to atmosphere

IQ FACTOR

It's a tough game to win

FUN FACTOR

Engrossing - and very user-friendly



ACE RATING 813

Command Post. The idea is for the player to utilise his limited forces in an attempt to defend his Command Post. Choosing the forces is of the utmost importance to the player as it determines the player's tactics for the game. Several armoured pieces are available: howitzers have the longest range and a high attack strength but once positioned are immovable; Ground Effect Vehicles are highly manoeuvrable but have a lower attack strength.

Once the pieces have been deployed

RELEASE BOX

C64/128	£19.95dk	REVIEWED
IBM PC	£24.95dk	REVIEWED
AMIGA	£24.95dk	REVIEWED
ATARI ST	£24.95dk	IMMINENT

When you find the cage where each of the kids is held, a quick crack of your whip will smash the padlock and set them free. The same treatment will also stun thuggee guards and kill snakes, but be warned: you need to be pretty accurate to stun guards properly, and they don't stay out for long anyway.

If you can free all eight kids without running out of lives - guards, snakes and large drops all kill you, as do the level's marauding bats and the occasional fireballs that thuggee priests fire at you - you have to dash to the exit, where you can leap into a mine car and go on to level 2. After the usual delays for disk access or tape loading, you'll find yourself trundling down the mine's railway system towards the Temple of Doom itself.

The action here's largely down to fighting off thuggee-filled mine cars with your

VISUAL EFFECTS

Chunky, but quite appealing

AUDIO

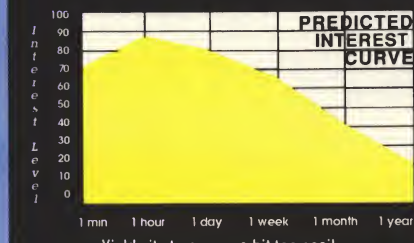
Music soon starts to grate

IQ FACTOR

Some cave layouts to memorise

FUN FACTOR

Easy to get stuck in

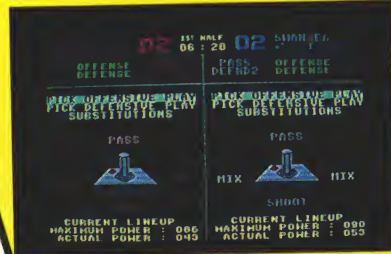


ACE RATING 776

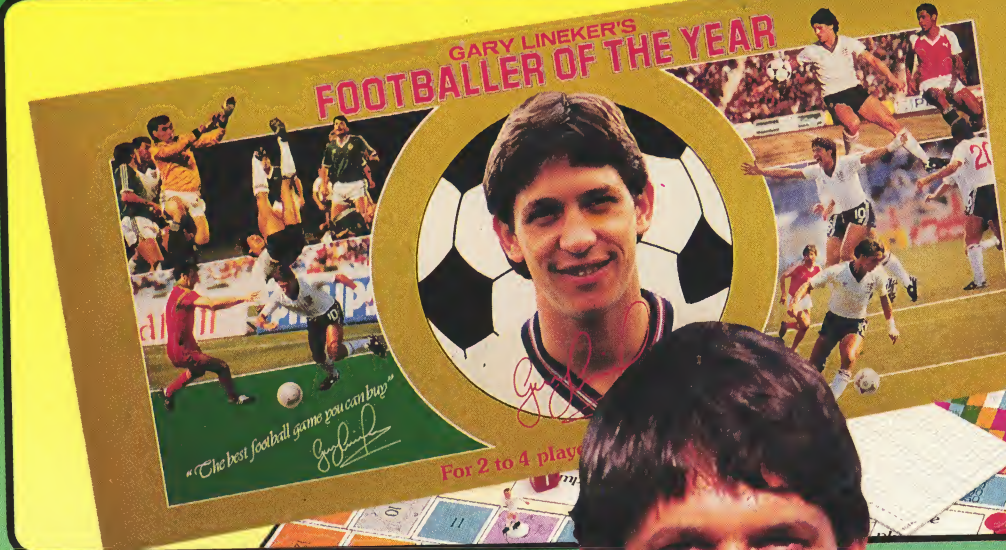
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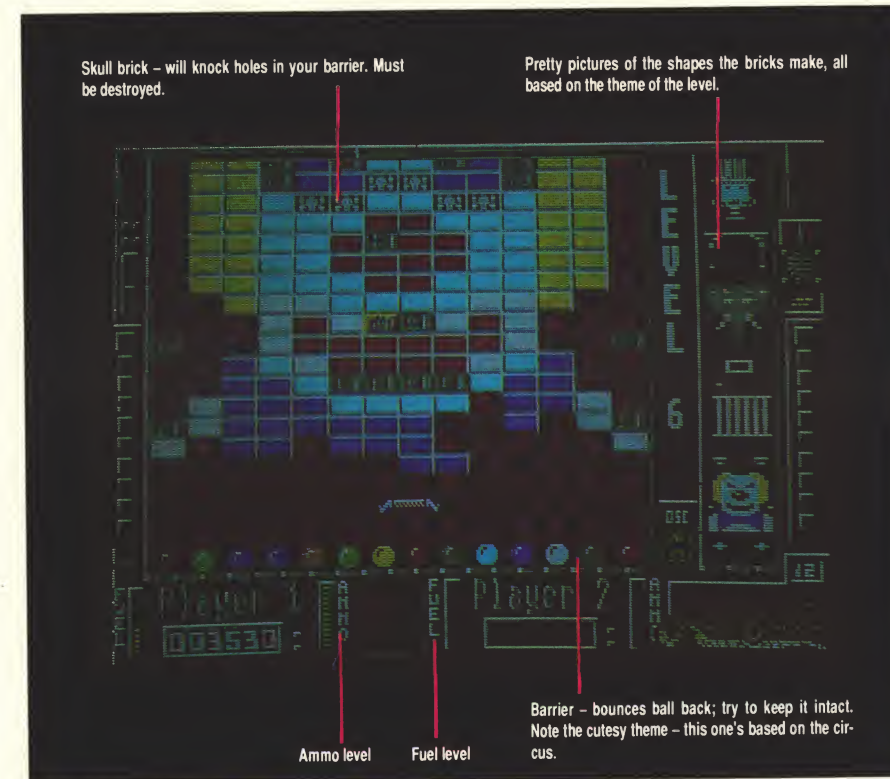
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S	Skulls take out bricks from your barrier
A	Replenishes ammo
B	Rebuilds holes in your barrier
C	Traps ball on bat
E	Extra life
F	Fuel for your thrust popper
H	Halts scrolling – very useful in tight spots
L	Gets you that essential firepower
T	Thrust unit
S	Alters ball speed – when it's whizzing you can really clean up a screen.

you are the ones giving you ammo, and the skull bricks – if you miss these they'll take out chunks of your barrier when they scroll down to it. A constant bother throughout are the firedrops released when your ball strikes certain randomly-placed bricks (which unfortunately have no special features to identify them); the firedrops also take out bricks from your barrier. Destroy them by bumping them with your bat. You can gain swift access to higher sections of a level or different levels altogether by dropping your ball inside the

ADDICTABALL

ALLIGATA'S bouncing bat-and-ball game.

The game's note of originality is largely due to the fact that it scrolls vertically, with your bat at the bottom of the screen and the

bricks you must destroy moving down towards you. Beneath your bat is a single line of bricks; so you don't even have to ping the ball to stay alive – it can just bounce around *ad infinitum*. But if that thin line of bricks is pierced – and there are plenty of reasons why that might happen – your ball can disappear to lose you a life.

Since the game scrolls you don't get separate screens as such; instead, *Addictaball* offers 6 levels of around 10 screens size, each level with bricks arranged around a different theme. The theme for Level 1, for instance, is transport; the pattern of the bricks is not instantly obvious, but the pretty little motorcycle/car/steam train going back and forth as you reach crucial areas makes the point pretty clearly. Blast the thing with your ball several times until it disappears and you can progress through the level.

Your bat is slightly different from other games in the genre; you need laser power and thrust (allowing you to move up and down) throughout. Thrust may sound unnecessary, but it can come in useful for hopping over indestructible bricks and getting out of tricky situations.

As in other *Breakout* derivatives, certain bricks will give pain or pleasure when hit (see box). Particularly important targets for

hyperspace transporters - but this is easier said than done.

Most troublesome of all though are the aliens contained in certain bricks. These little rascals buzz around most annoyingly and must be terminated with extreme prejudice; just make sure you've got lots of ammo.

Addictaball may not be the most original thing since *Space Invaders*, but it has enough flavour to make it worth considering even if you've already got *Arkanoid* or *Impact*. It's every bit as addictive as those two, and has an excellent balance between frustration and compulsion.

● Peter Connor

A lot of thought's gone into the screen design

AUDIO ■■■■■■

Pings, pongs, and some jaunty intro music

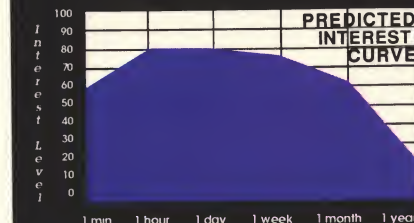
IO FACTOR ■■■■

You'll have to think on your feet in tight spots

FIN FACTOR ■■■■■■

Highly addictive – but can be very frustrating

			PREDICTED
--	--	--	-----------



Eventually you'll either solve it or get stuck

ACE RATING 826

C64/128	18.9500, £7.9500	IMMINENT
SPEC	N/A	DEC 87
ATARI ST	14.9500	REVIEWED
AMS CPC	N/A	DEC 87
AMIGA	TO BE DECIDED	
MSX	18.9500	IMMINENT

HERE we have the sequel to *Druid*, one of the more popular *Gauntlet* clones. The game looks very similar to its predecessor with the same old druid character running around a colourful scrolling maze/room background while being chased and attacked by lots of energy-draining nasties. But you soon discover that the game play has been souped up considerably.

If you need an excuse to play the game, the scenario is as follows; it's been 103 years since Acamantor was expelled from the land of Belom. Hasrinaxx the druid has

space in his spell book he may collect a spell by standing over the icon and pressing the + key. The spells are quite varied in their use; effects range from lighting up a dark area of land to obliterating all the monsters on the screen.

Rushing around blasting monsters and grabbing spells is exhausting stuff and though the druid can cast spells to protect himself from hits and drive away his foes these have very short durations. Despite replenishing your energy with Banquet spells (looking like a Colonel Sanders chicken leg)

Druid and 2

For those of you who already have *Druid* the question of *Enlightenment* justifying another ten smackerones instantly arises. The hordes of new spells do add new twists to the old plot, but on the whole the game-play remains very similar. It's a close thing, but unless you enjoyed the original enough to consider yourself a *Druid* fanatic £10 may just be a little too steep.

ENLIGHTENMENT

Does FIREBIRD's wizardry lift the gloom?

Dangerous Druid doings

Hasrinaxx and his faithful elemental, a Golem, battle their way through hordes of zombies. Just a little further to go before he reaches a new spell.



grown older and wiser with many new spells at his fingertips, and now the time has come to use them. Acamantor has returned more powerful than ever and this time expelling him is not the answer. As one of the last great druids you must find and kill the evil Sorcerer.

Enlightenment is rather more of a magic-based game than the original and your druid now has access to 32 different spells, though he may only have eight in his spell book at any one time. Spells are represented as icons and are distributed throughout all of *Enlightenment's* 15 lands. If the druid has a

you soon find your strength sapped by the relentless onslaught. But fear not - your druid has help on hand in the form of the 'conjure elemental' spell.

Four types of elemental can be conjured to fight on the druid's behalf; Golem, Wisp, Phoenix and Kraken representing Earth, Air, Fire and Water respectively. These can be controlled by the computer or via a second joystick - effectively making *Enlightenment* a two player game.

If the computer controls the elemental you are given a choice of three movement commands; follow the druid, send in a direction or wait. This limited choice makes the elemental a little unwieldy but still well worth the conjuring.

Each realm which the druid must travel through is largely dominated by one type of element and it is this that determines the power of your elemental. For example, the Kraken is strong in the watery marshland but weak in the desert, so it helps to keep at least one conjuring spell in reserve.

Enlightenment has a big play area and a large assortment of spells and foes. All this adds up to a difficult enjoyable challenge - but games of this sort are becoming very common and, though good, *Druid 2* is beginning to wear thin the old *Gauntlet* theme.

● Andy Smith



Another land and a new elemental. The druid sends his Kraken(water elemental) to deal wet death to some dastardly demons. But be careful - slime monsters are gathering!

VISUAL EFFECTS

Almost identical to *Druid*

AUDIO

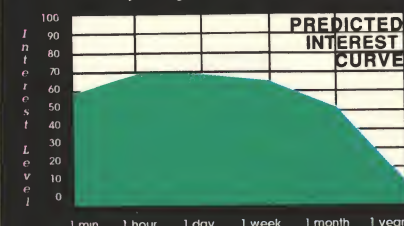
Title tune and average blast noises

IQ FACTOR

Not too demanding - but it helps to map it

FUN FACTOR

Jolly enough - especially in 2-player mode

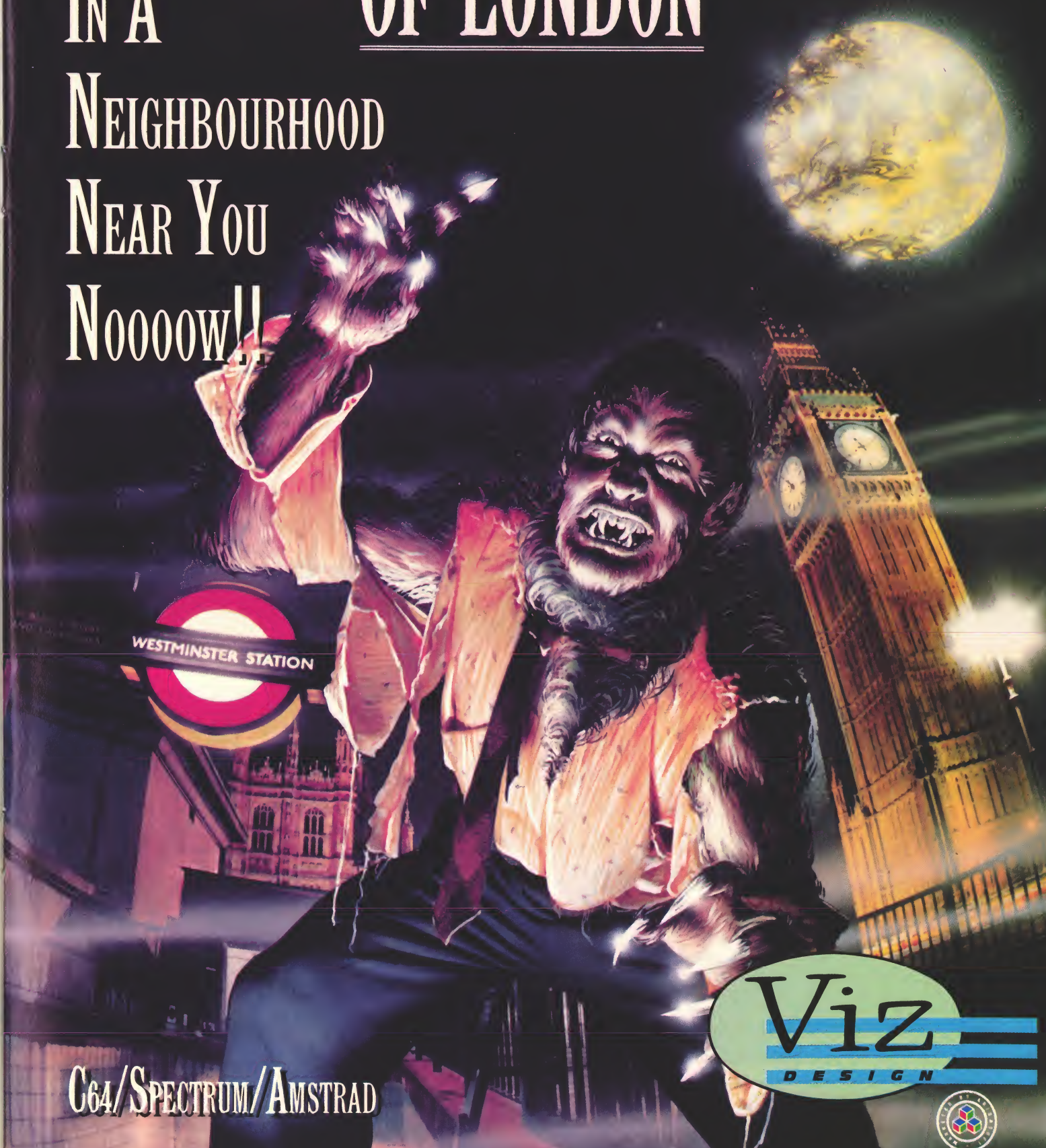


Once you solve it your unlikely to return

ACE RATING 721

Werewolves

IN A
NEIGHBOURHOOD
NEAR YOU
Nooooow!!



Viz
DESIGN

C64/SPECTRUM/AMSTRAD

PROFESSIONAL SKI SIMULATOR

Go snow blind with CODE MASTERS

SHOULDER your skis, grab an airline ticket and catch the next flight to Austria for Code Masters' latest game. *Professional Ski Simulator* follows firm-

ly in the footsteps of Codemasters' greats including *Grand Prix* and *B.M.X. Simulator*. *Pro. Ski Sim.* is for one or two players and contains seven authentic slalom slopes.

The player starts the game at the top of the slope and uses three keys (left-right and thrust) to guide his on screen sprite toward the bottom, taking care to weave in between all the gates on the way down. Each slope has its fair share of dips and flats and the player has to use the 'thrust' key to pump his poles and propel himself along the flat sections. Holding the thrust key down while the character descends a small steep section results in the character adopting a crouched position that increases his speed.

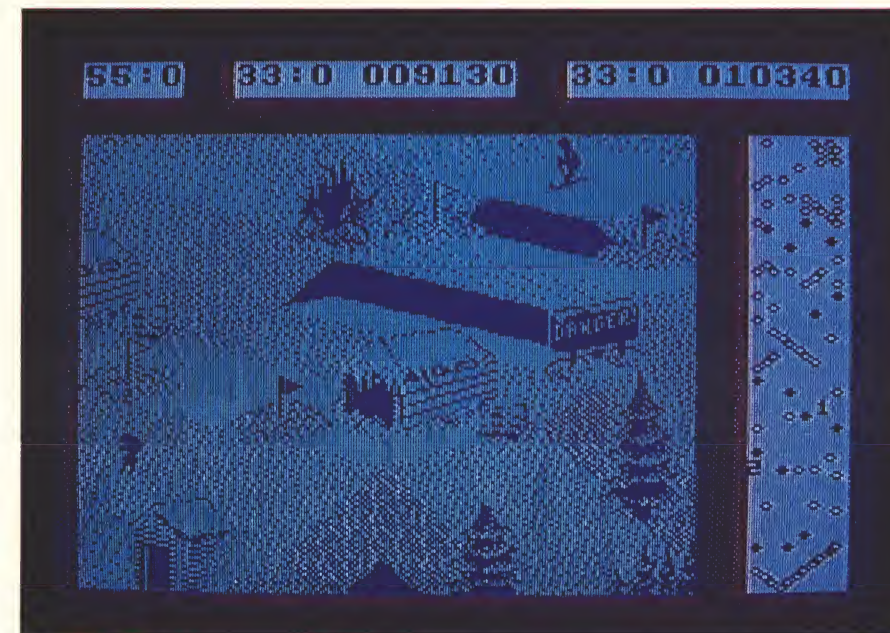
Each course has the player racing not only the clock - you get less time for each course - but also struggling to remain on the screen. You view the game through a large on-screen window that continually scrolls down, and should you hang around for too long your character disappears off the top.



Safely at the bottom of the course. Now for the apres-ski...



Amstrad version. Piste 3: snow here is white as ...snow



Piste 2 (for piste read slope) on the Spectrum version: those jumps are tough to negotiate

Amstrad Version

Incredible but true - the snow in the Amstrad version is white, the players are in red and the game plays exactly the same (but slightly slower) than the Spectrum version. Just as addictive and just as much fun.

If that happens then you have to refer to the radar strip to the right of the screen in order to navigate. This gives a very simple aerial view of the slope and only shows the gates and the players, not the surface features.

Initially, the gameplay is tough and takes a fair while to get used to. The screen design is colourful, (blue snow?) but it takes time before the player can confidently



RELEASE BOX

C64/128	£1.99cs	DEC 87
SPEC	£1.99cs	REVIEWED
AMS	£1.99cs	REVIEWED

recognise the terrain features. If you can get to grips with the controls and learn the layout of the slopes you're in for a lot of fun.

● Andy Smith

“...the best racing game we've ever played - even better than Out Run!”

Zzap 64 'ANOTHER DAY AT THE ARCADES'



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INFECTED foliage? Mutated trees? It must be those unscrupulous aliens again, spraying the landscape with their nasty red virus. There's nothing for it but to get in your hoverplane, take to the skies and shoot them down. That's Zarch in a nutshell - and if it just sounds like a boring old shoot-em-up to you, prepare to be surprised.

There are the graphics to start with. True perspective 3D - even solid 3D, as here - is nothing new, but Zarch's unusual viewpoint gives it a completely different feel. Zarch is not a flight simulator: rather than offering the pilot's-eye view of games like *Elite* and *Mercenary*, it takes you out of the cockpit and shows you your hoverplane from a distance, keeping the view level no matter how you turn or roll.

Zarch's flying controls are unusual too. The game's mouse only: pressing the left-hand mouse button gives you a short blast or 'burn' on the ship's engine. At first this lifts you straight up off the landing pad, but by moving the mouse you can tilt the hoverplane in the direction you want to go - and a quick burn will have you on your way. The tilt-burn-tilt-burn flying style these controls lead to is rather reminiscent of *Thrust*, but being in 3D it's that much trickier, and that's before you even start to think of combat.

In flight the hoverplane swings freely about its midpoint as if the nose was weighted, so as to point in the direction of tilt. This gives you effective control over which way the hoverplane (and therefore its laser cannon) faces, but means that the plane is always nose down - so you must be above a craft to shoot it. That's no problem if you're after the slow, low-flying seeders which

RELEASE BOX

ARCHI	£19.95dk	REVIEWED
AMIGA	UNDER DEVELOPEMENT	
ATARI ST	UNDER DEVELOPEMENT	
	NO 8-BIT VERSIONS PLANNED	

spray the landscape with virus. Just track them down on your scanner, spiral down and spray them with bullets. One hit finishes their pollution career - and they don't fire back!

Combat height is more of a problem with the aliens' drones and mutants. These hunter-killers work along the same lines as your hoverplane, but their weaker engine power and lower rate of fire should win you the day one-on-one. For massed attacks you'll need to spray bullets wildly, or resort to more serious weapons: either homing missiles - use them wisely because you can't replace the three you start with - or smart bombs. The latter not only kill any bad guys in the area, but even reduce nearby trees to ashes!

Enemy hits won't destroy the hoverplane immediately: your shields will deflect bullets, but this costs you fuel. The heavy thrusting of combat takes its toll here too, so you'll need to refill your tanks at home base on long or violent missions.

ZARCH

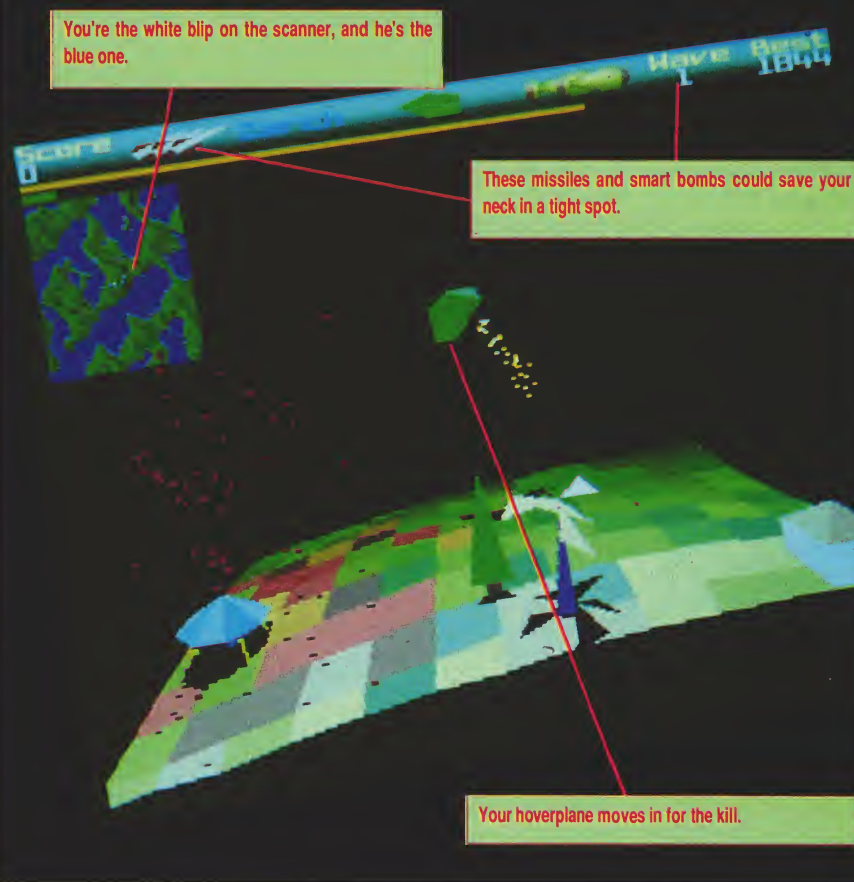
ACE
979
RATED

SCREEN TEST

SUPERIOR's high class shoot-em-up

The Red Death

This grounded alien seeder's spraying the landscape with red virus. He shouldn't have landed to do it though - he's a sitting duck!



Aside from running out of fuel or loss of control, the best way to lose one of your three lives in Zarch is by mid-air collision. It's easy to crash into opponents while you jostle for a height advantage, and to make matters worse the aliens send out little kamikaze pests which will try to ram you.

If you succeed in wiping out all your alien opponents - only half a dozen, at first - you'll get a hefty bonus based on the amount of landscape still unpolluted. Then you're faced with a new wave of aliens more numerous than the last, with nastier types like fighters and bombers adding to your troubles. An extra smart bomb and life every 5000 points will help keep you blasting away, but you'll need a lot of practice to get even that far.

Sound effects are poor - little more than an afterthought, really - but Zarch's graphic perfection and timelessly addictive gameplay make it an instant classic.

● Andy Wilton

VISUAL EFFECTS

Poetry in motion

AUDIO

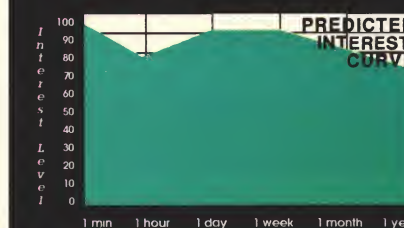
Weak effects and not many of them

IQ FACTOR

Never mind the depth...

FUN FACTOR

...feel the playability



Master the controls and you're hooked

ACE RATING 979

THUNDERCATS

THE LOST EYE OF THUNDERA

ACE
931
RATED

Feline fury from ELITE

PUSh in Boots takes on a whole new meaning this Xmas, as the fruits of Elite's *Thundercats* tie-up hit the worthy chemists and thousands of other software dealers. Elite are producing three games based on the hit TV series/comic/plastic toy, this first one written by software house Gargoyle.

If the mention of their name puts you in mind of Gargoyle sideways-scrolling games like *Marsport* or *Dun Darach*, then the look of *Thundercats* won't come as a surprise: it's a side-on view scroller with all the graphic flair of old. Don't expect complex arcade adventuring though: that Elite influence has given the game buckets of good honest arcade playability instead.

The Eye of Thundera, source of the Thundercats' power, has been stolen by the evil Mumm-Ra's henchmen and somebody's got to go and get it back - you. As that heroic moggie Lion-o you'll have to fight your way into Mumm-Ra's stronghold, hacking and blasting hordes of nasties and leaping across lethal gaps which block your path.

Each of the game's 14 levels is a straight-line dash from start to finish. Though there are obstacles to leap over and platforms to run across, there's no real choice of route. Just cover the distance within sixty seconds, killing or dodging any nasties you come across, and it's onward to another, tougher level.

You start off armed with a broadsword to fend off the foe. It's a tricky weapon to use: timing is critical, and you'll need to duck while using it to hit opponents below (or shorter than) you. Lion-o stops running to use his sword, giving any pursuing nasties a

chance to catch up, so you'll need to work on turn-and-slash moves if you want to live long. You'll also have to keep moving: run out of time, and Mumm-Ra himself will polish you off very quickly indeed.

Tokens along the way can be picked up for extra lives, and also for a change of weapon. Learn which ones do what - some of them can be distinctly unhelpful - and you'll soon be blasting your opponents instead of hacking them. There are vehicles you can use too (if you can find them) to help beat those time limits, not to mention those bad guys.

As well as recovering the Eye itself, you can rescue imprisoned comrades on your mission. The game has three rescue levels, but you only get one shot at

each of them - lose a life and you're straight on to the next level, with no second chance for that hefty rescue bonus. To further vary the pace of the game, levels 4 to 7 can be taken in any order you want. Find the right order and you'll make things a great deal easier for yourself, but working that strategy out will take you plenty of time.

The pace of the game never lets up, and



Level 3's a bonus mission: rescue Tygra, a fellow Thundercat of yours, without losing a life.

The Cat's Whiskers

The Fertile Plain (level 1)



The finishing line's this way, but you'll have to fight your way to it.

Your current weapon - the broadsword.



In the Garden of Fire (level 4) and you're looking for a vehicle to help you on your quest.



The Caves of the Molesmen (level 2), bats are a constant menace here, but the fireball weapon you've got should help fend them off.

its simple short term aim - get to the finishing line before the time runs out - combines with the toughness of the opposition to make it fiendishly addictive. The game demands your full concentration, and gets it too. More than *Green Beret*, *Ghosts and Goblins* or anything else in this style, *Thundercats* goes the distance.

One down, two to go

Of the two *Thundercats* games yet to see the light of day, one's being developed in house at Elite, and so is pretty much under wraps. The other's a four way scroller with an exploration element to it, but as with *Lost Eye of Thundera* the accent's on arcade action rather than strategy. It should be ready real soon now, but the title's still undecided: obviously Elite will have to go to considerable lengths to avoid confusion, if more than one of the games is out at once.

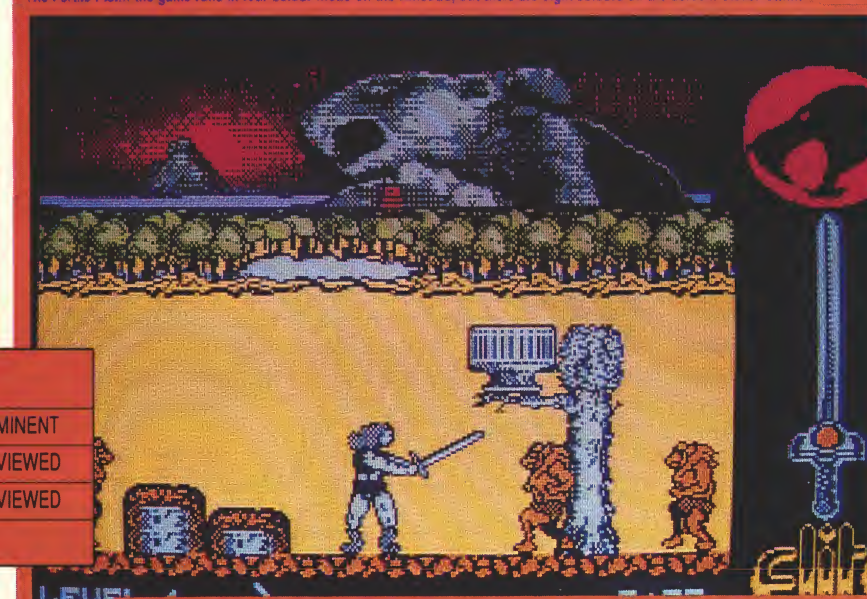
It's graphically impressive too: the animation is stylish and the scrolling impeccable, with digitised backdrops adding enormously to the game atmosphere. The enlarged 128K version uses the extra memory to store further digitised graphics for bonus

screens and the like, along with an enhanced soundtrack for Rob Hubbard devotees, but even with only 48K you'll still have a good-looking, compulsively playable game for your money.

● Andy Wilton

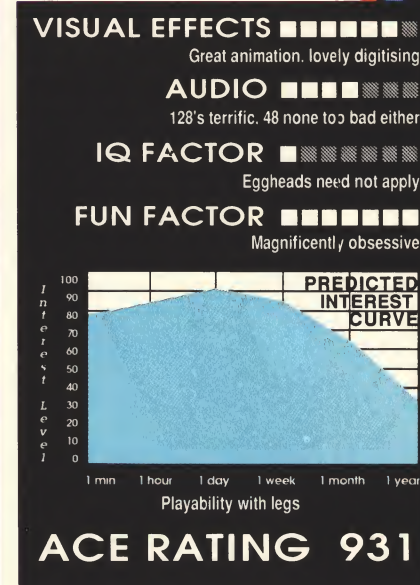
Amstrad shot:

The Fertile Plain: the game runs in four colour mode on the Amstrad, but there are eight colours on the screen. Clever stuff!



C64 shot: The C64 version isn't finished yet, and the Lion-O sprite may well be redrawn before release, but this should give you a fair idea of what to expect.

RELEASE BOX		
C64/128	£9.95cs, £14.95dk	IMMINENT
SPEC	£7.95cs	REVIEWED
AMS	£8.95cs, £14.95dk	REVIEWED



Amstrad Version

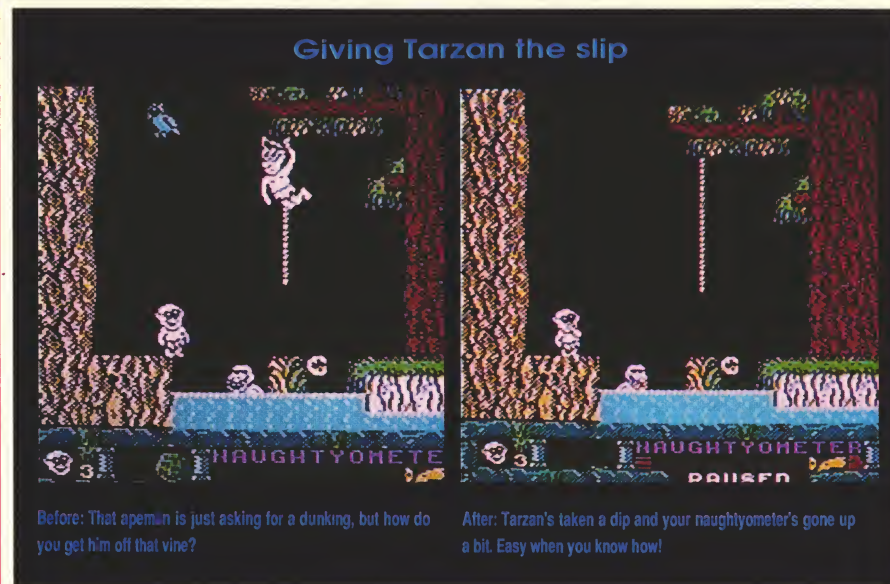
Not one version but two: 464/664 users get fewer digitised graphics, and only 11 game levels. On the 6128 you'll get all 14, but either way the game looks great and plays better.

C64 Version - a taster

Gargoyle have always tended to specialise in Spectrum and Amstrad games, so a major C64 release is something of a departure for them. The C64 *Thundercats* is some way off being finished, with work still in progress on the crucial difficulty tuning.

JACK THE NIPPER 2: COCONUT CAPERS

Mischief in the jungle with GREMLIN



SEQUELS are big news at the moment: if you haven't bought *Enlightenment (Druid II)* it's probably because you're saving your money for *Gauntlet II*, *Impossible Mission II*, *Matchday II* or some such follow-up. Now here's another contender for that cash: *Coconut Capers*, being the further adventures of that troublesome tot Jack the Nipper.

After his outrageously naughty behaviour in the original game, so the scenario goes, Jack is arrested and shoved on the first plane to Australia. He bails out en route however, and parachutes into the jungle below. Now you take control of Jack, dodging or fighting the jungle's many dangerous occupants – wild animals, wild natives, wild parents and the like – and indulging in various naughty deeds.

These familiar objectives may make *Jack II* sound like it's simply a tropical reworking of the original Jack, but nothing could be further from the truth. *Coconut Capers* doesn't have the rashometer, the breakability or the unusual 3D of its predecessor. Instead it has gaps to jump, ropes and ladders to climb, and a whole load of instantly lethal creatures, objects and drops to avoid. It has timing problems with alligators and floating logs, it has vines to swing on, it has rope-bridges and tree-houses in the jungle canopy to leap between. It is – in case the penny still hasn't dropped – a platform game.

It's not just a platform game mind you – there are those naughty deeds to do, and

plentiful weapons let you shoot your way through some problems – but it is mostly a matter of judging gaps and getting your timing right. The naughty deeds involve finding useful objects – grease, pineapples or toffee for example – which you can take elsewhere and wreak havoc with. Usually the object is quite some distance from the location you need it in, so without good platform skills you probably won't make it. Of course, you could cover that distance only to find you've got the wrong object: some of the puzzles can be pretty obscure, to say the least, and you can only carry one object at a time.

Objects aren't the only things to pick up in the jungle. There are also dummies, which give you an extra life if you've lost some of the nine you started with; native shields, which give you protection against most forms of death for a limited time; and weapons, notably coconuts which you can throw at jungle nasties. As with the objects used in naughty deeds, you can only carry one weapon at a time.

Other game features like slippery slopes, lava and swamp pools, impassable fires and Indiana Jones-style mine cars all add variety to the proceedings, but the game does have its problems. The nasties are reset every time you leave a screen, even if you only do so momentarily in mid-jump, and Jack's so small he can die repeatedly while hidden from view behind tree-trunks or the like – both of these adding to the considerable frustration any platform game has to offer.

The real problem for most people won't

be minor frustrations however, but the fact that *Jack II* is largely a platform game. There's a huge mapping task to get on with – 192 screens, and no names to identify them by – and those naughty deeds are pretty tricky even when you know what you're supposed to be doing, but the gameplay is dated to say the least. Graphically it's a treat, colour clashes to one side, and the game's little musical jokes – a bit of the *Stingray* theme tune if you fall in the water, or a snatch of *Agadoo* when you pick up the pineapple – give it audio appeal too. If it's a dinosaur in gameplay terms it's a slick and very well-presented dinosaur, but you'd be hard put to call it an advance on the original.

● Andy Wilton

Amstrad Version

The CPC *Jack II*'s very well drawn, but the use of four colours rather than sixteen lets it down a bit graphically. Good sound is the only other difference from the Spectrum version.

RELEASE BOX

C64/128	£ 9.99cs, £ 14.99dk	IMMINENT
SPEC	£ 7.99cs	REVIEWED
AMS	£ 9.99cs, £ 14.99dk	REVIEWED

VISUAL EFFECTS

Great cartoony graphics, but some bad clashes

AUDIO

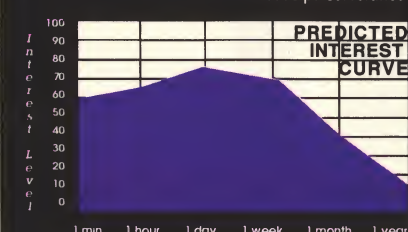
Witty snatches of tunes

IQ FACTOR

Lots to map

FUN FACTOR

Needs perseverance



Takes time and effort to get in to it

ACE RATING 709



A MEDIEVAL SMASH 'EM UP... OF DEMOLITION & DESTRUCTION



SCREENSHOTS FROM CBM64/128 VERSION



Knights in shining armour you certainly are not, more like black hearted villains as your marauding trio run riot through countless medieval landscapes, laying to waste fortress after fortress, castle after castle. Obviously you can't expect to have it all your own way, there'll be resistance from the peasants and gentlemen and the Age masters but let that not deter three evil minded rogues on a path of demolition and destruction. Computers fast moving action that'll keep you coming back time and time again.

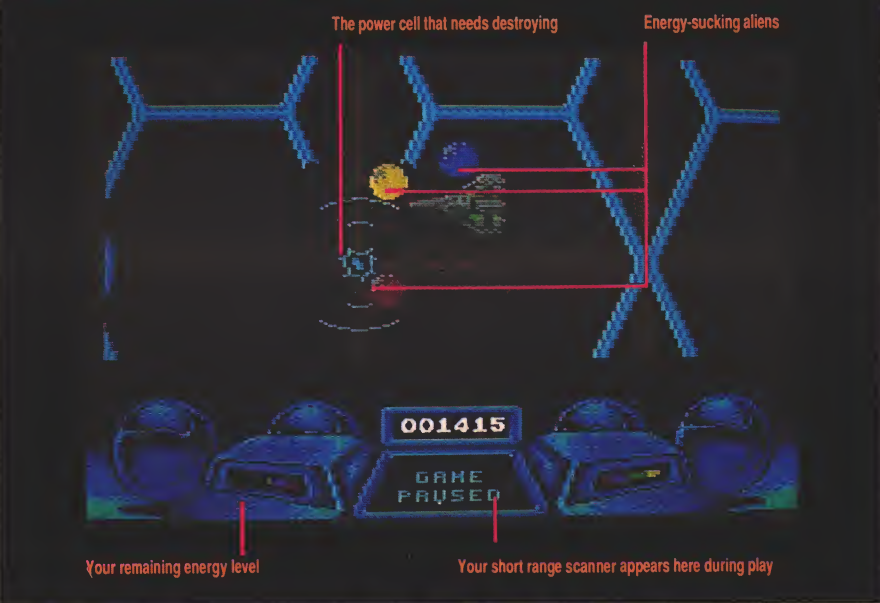
C64	AMSTRAD	SPECTRUM
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Cell structure.

Level one and you've got to destroy the four power cells before finding the exit.



and contact with an alien reduces your energy. Locating the power cells is achieved by consulting your short range scanner, displayed in the bottom portion of the screen. Benefits are available in the shape of pods scattered throughout the grid. Shooting a pod releases several small capsules that - if caught - can grace your ship with such goodies as Smart Bombs, extra lives and extra energy.

Control of the spacecraft is very Uridiumish; you flip over to change direction or to fly under the grids in the chase for your benefits. The spaceship stays central to the



screen and everything else scrolls around it. Implosion's graphics are very good, the grids are all varied and colourful and really do convey the impression of some vast alien structure. The screen however is curiously designed; the top portion is your overhead view of the action while the bottom portion is a cockpit view of your instruments. The game grabs you because it strikes that crucial balance between addictiveness and frustration; and those eight levels should keep you going for some time.

● Andy Smith

RELEASE BOX

C64/128	£ 9.95cs, £14.95dk	REVIEWED
SPEC	£ 8.95cs	IMMINENT

IMPLOSION

CASCADE's interstellar cell destructor

PESKY aliens! They're up to their old tricks again. This time they've only gorn an' built an artificial planet around a White Dwarf star and sent the planet on a collision course with Earth! Would you credit it?

Implosion puts the player in control of a spaceship flying over the surface of a planet made up of eight levels of grids. The object is to destroy a number of power cells - with your front-firing gun - that hold the grids together.

Having destroyed the set amount of

power cells, you then have to fly your ship towards an expanding and contracting hole that looks like a camera's aperture. Position your ship over the hole, hit the space bar and you are transported to the next level.

You start the game with three lives, and a limited amount of energy for each life. Small aliens fly around the grids in packs



VISUAL EFFECTS

Varied and colourful backgrounds

AUDIO

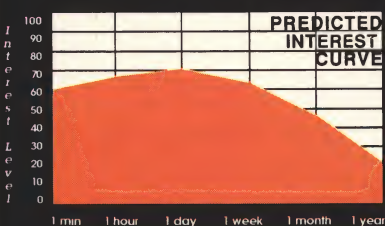
Lively spot effects

IQ FACTOR

Won't strain the old grey matter

FUN FACTOR

You can get straight in to the action



With 8 levels you won't complete it in a hurry

ACE RATING 702

THE FUTURE



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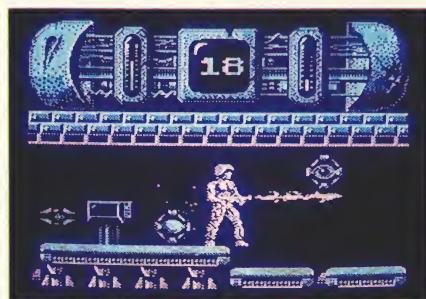
TRANTOR

Young guns GO! for it.

ABANDONED on an alien planet, Trantor has to fight his way to freedom in this arcade action game. You control Trantor and must guide him on his quest to collect the 8 letters of a code word that he needs in order to escape.

The sideways-on view of this alien planet takes you through several levels of tunnels, which Trantor must negotiate in his search-and-destroy quest for eight letters of a code word needed to escape the planet.

At the top of the screen is a timer which



That crippling time limit means you've got to think on your feet for this game.

counts down from 90 to zero. Each tunnel has at least one terminal containing a letter for the code word, and Trantor has to reach this before the time runs out - more than a few shades of *Impossible Mission*.

There's a flame-thrower to aid Trantor in his fight against the various flying aliens, contact with which will reduce your energy level. An energy top-up is available in the shape of hamburgers, found in lockers on the various levels. Other goodies include devices to set the timer back to 90 and fuel replenishments for the flamethrower.

Trantor has some very crisp and colourful graphics, which when combined with the smooth animation add atmosphere to the game, but this is marred by weak and uninspired sound. Trantor also lets itself down simply because the aliens are almost impossible to destroy, at least if you still hope to reach a terminal in the allotted time. The random distribution of the goodies in the lockers means that even if you know your way around it's very much left to chance whether you'll get a hamburger in time or not.

Frustration with over-frequent deaths may put you off to begin with, but once

you've overcome this initial barrier you'll find completing the game far too easy for it to provide anything like a lasting challenge.

● Andy Smith

RELEASE BOX		
C64/128	£9.99cs, £14.99dk	IMMINENT
SPEC	£8.99cs	REVIEWED
AMS	£9.99cs, £14.99dk	IMMINENT



XECUTOR

Have a blast on THE EDGE

ANOTHER vertically scrolling shoot-em-up? Another load of blasting, collecting weapons, and blasting some more? Well, yes - but don't write Xecutor off immediately.

It's colourful for one thing, in a field which is (on the Spectrum at any rate) mostly drab or just plain monochrome. It's also got a tremendous combo option that has



A wave of aliens dives towards you. Shoot them all, collect a token from the debris and you'll increase your rate of fire.

both players on screen at once, competing (unwise) or co-operating (much better).

The object of the game is to blast the aliens, without getting blasted yourself or

RELEASE BOX		
C64/128	£8.99cs, £12.99dk	DECEMBER
SPEC	£7.99cs	REVIEWED

rushing into the scenery. Attacking nasties descend in waves, four at a time, firing vertically down at you while defensive gun emplacements cling to the scenery and fire horizontally. Destroy an emplacement or a wave of bad guys, and a customising token appears in the debris.

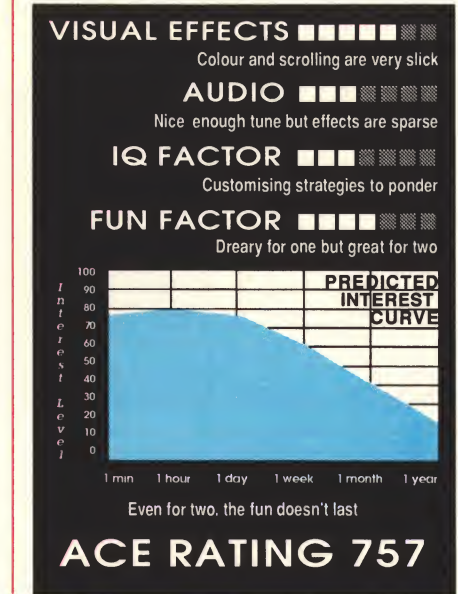
When a token appears you have a choice - shoot it, or pick it up. Shooting tokens stores them away to earn you bigger, more impressive features while picking one up cashes in any you've stored and adds the appropriate feature to your ship. Increased speed, withering firepower and a handy protective shield can all be yours.

So far so good, but your initial firepower and speed are very puny indeed and this makes the game rather tough to get into. Worse still, the gameplay has senseless flaws in it: in particular, if you lose a life your craft

may well reappear in an instantly lethal position. This can cut games extremely short and could easily have been avoided.

Not tremendous stuff then for a single player, but switching to two-player mode transforms the game. You can play a combo game competitively, but with the aforementioned problems you won't get too far that way. Co-operate instead, and you'll soon get the firepower to really trash those aliens - and have a lot of fun along the way.

● Andy Wilton



Are you horrible enough
to go on the

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GRAND SLAM

All-court action from EIDERSOFT

THIS tennis program gives you the chance to have a go at one of the biggest achievements in sport; the Grand Slam of French, American, Wimbledon and Australian titles. It's a tough old objective, but the game is just about good enough to tempt you to practice enough to give it a go.

Grand Slam's set up is very similar to tennis games that appeared on 8-bit machines some time ago; you get a view up the court from behind your player, and can move around and hit the ball in a variety of ways.

This variety of shot and the number of factors you must take into consideration are what make the game interesting. For instance, the surfaces played on include clay, grass and hardcourt; each one gives a different kind of game and requires more or less subtle adjustments in your style.

You control your player by moving the



With your sparkling whites and greasy black hair you attempt to outplay the aggressive Demon - World No. 1 - on the fast and luscious grass of Wimbledon

mouse, then pressing the button to execute the shot. Different shots can be played with the aid of the numeric keypad; 8 gives you slice, 9 a bit of that old Bjorn Borg topspin, 6 a spectacular smash.

The problem, of course, is the opposition. There are four opponents, ranging from the

aggressive to the sluggish. Each one plays in a different style, so you must change your own tactics accordingly. You then have to take in to account the kind of surface you're playing on, the weather conditions and even the stringing and type of racquet you're using.

One common problem in computer tennis games - and one that Grand Slam hasn't solved - is that of letting you know where the ball is in relation to your racquet; sometimes you hit the ball when you think you shouldn't, sometimes you miss when you think you're on the spot.

This isn't necessarily a huge problem, but it can make play a little frustrating sometimes.

These factors are what make Grand Slam an interesting game; you can even, if you wish, question a line-call in McEnroe fashion. The game has good but not brilliant graphics and a few digitised sound effects, such as line calls and net cords. It doesn't win by straight sets, but it puts up a pretty good show

● Pete Connor

RELEASE BOX

AMIGA	£ 29.95dk	REVIEWED
ATARI ST	£ 29.95dk	DEC 87

VISUAL EFFECTS

Nice movement and neat backdrops

AUDIO

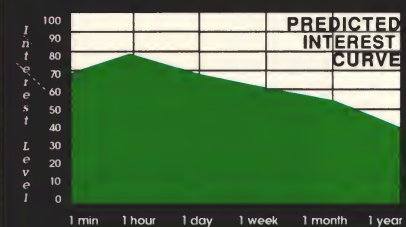
Some cute digitised speech

IQ FACTOR

A certain amount of strategy required

FUN FACTOR

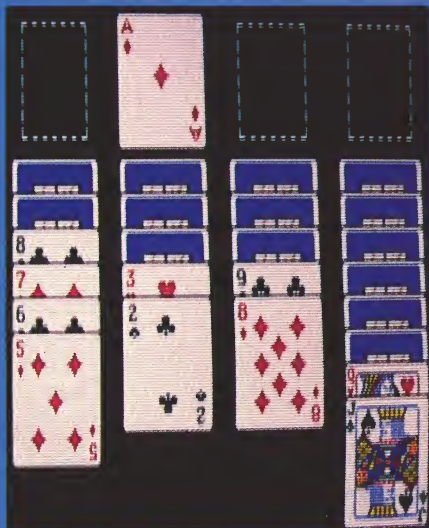
Very playable and quite demanding



ACE RATING 775

THE wonder of 16-bit computing just to indulge in the solitary vice of solitaire? Contrary to expectations, Solitaire Royale was well worth programming, and is well worth playing

For a start, the PC graphics are excellent; even with the humble CGA adaptor the cards appear very crisp and clear, while with the EGA the multi-colour effect is superb. Then you get to play eight differ-



Difficult decisions to be made in the game of Klondike

SOLITAIRE ROYALE

Solitary fun from MIRRORSOFT

ent games as well as a number of children's solitaire games.

The games you can play range from the familiar Patience game - here called Klondike - to the rather more complex Reno and Calculation.

The program is very easy to use and operated either by mouse or by cursor keys; pull-down menus are available at any time by pressing the ESC key, and give help, general info or access to a new game. The smooth presentation and helpful explanatory booklet make Solitaire Royale a classy and entertaining product.

● Pete Connor

RELEASE BOX

IBM PC	£ 20.00dk	REVIEWED
OTHER VERSIONS TO BE DECIDED		

VISUAL EFFECTS

Excellent definition on court cards

AUDIO

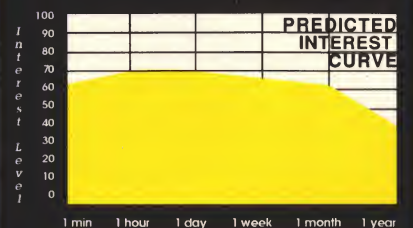
OK if you like a quiet game

IQ FACTOR

There's more to Patience than you might think

FUN FACTOR

Surprisingly entertaining



ACE RATING 760

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Preview The Future!

PROJECT: STEALTH FIGHTER

SCREEN TEST

SPORE

ACE
919
RATING

BULLDOG pull out the pesticide

GENETICALLY altered spores are a nuisance at the best of times, let's face it, but when they overrun the base where you keep your stocks of pesticide you've obviously got to act fast. To be precise you've got to steer your ship around the beleaguered complex collecting the barrels of pesticide, blasting aggressive spores and wrecking the ubiquitous spore generators before they can produce more of the little blighters: not a job for the faint-hearted.

The game's 50 levels only take up one screen apiece, but each one is positively bulging with walls, security beam guns, reflectors and spore generators – not to mention pesticide barrels, repellants and energy flasks. To complete a level you just have to collect all the barrels on it, but this simple-sounding task will take you into the most dangerous, spore-infested corners of each layout.

RELEASE BOX

C64/128	£1.99cs	REVIEWED
SPEC	£1.99cs	IMMINENT
AMS	£1.99cs	IMMINENT

To get all those barrels you'll need to knock out the security beams that cordon off large chunks of each level (shoot the guns), or redirect them by turning the mirrors that bounce them around the screen (shoot them). As you dismantle the beams, hordes of trapped spores will surge towards your

craft. Desperate blasting isn't enough here, if you want to avoid the massed spores seriously draining your energy: you need tactics.

Spores are only really dangerous when they attack you from several sides at once, so the trick is to get them coming at you from one direction only. If you release spores, run away from them and then turn to fire you'll find their homing instincts have left them strung out in your wake, chasing you for all they're worth. Shoot them before they can reach you, shoot their generators before a whole load more are produced and you've cleared out that area of the screen with very

VISUAL EFFECTS

Slick, polished and bright

AUDIO

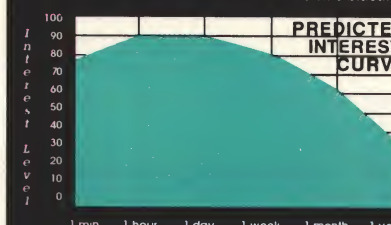
Great power drainage effect: good music

IQ FACTOR

Higher levels demand careful thought

FUN FACTOR

Terrific blasting!



Compulsion grabs you, and the depth holds on

ACE RATING 919

little energy – assuming you had the manoeuvring room to run away.

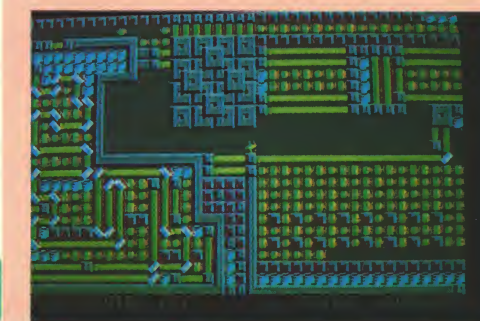
In practice Spore isn't so easily beaten. In tight corners, against overwhelming odds you'll need to think and act with lightning speed. It's not just a matter of blasting skills (though these help) but also of strategy. You'll have to plan the removal of the beams carefully so as to release the spores in a controlled fashion, and the reflectors make this a very tricky business at times.

Your initial allowance of 500 energy units won't get you very far, so it's essential to pick up the energy flasks on each level. You'll also find the repellants useful – pick them up, trigger them in moments of dire need (hit the spacebar) and watch as the spores fall over each other in the rush to avoid you. This repulsion only lasts 10 seconds and then they're after your blood again, but you can get a long way in that time if you know what you're doing.

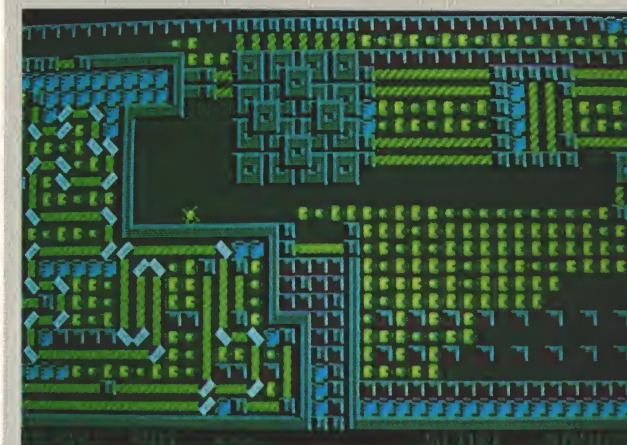
It would take an enormous playing effort to get through all 50 screens of the game without a large dose of hacking, but even if you manage it there's still more to do. An extra 20 user-defined screens offer tough challenges in their default states, and unlimited difficulty once you start altering them to your taste with the built-in editor. This and the Minter-esque loading game are lovely touches, but the winning combination of strategy, frenzied blasting and great graphics would make Spores a worthy full-price release anyway – and what a bargain it is at £1.99!

● Andy Wilton

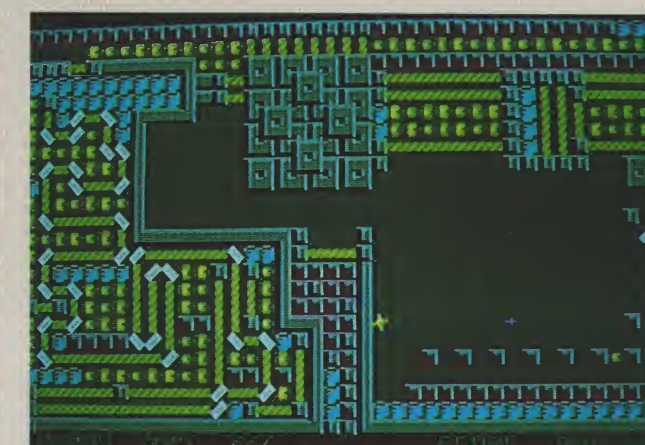
You're the little yellow 'starfish' in the middle of the screen. Below you is a security beam gun (small grey block): shoot this to turn the beam off, and then dash left to avoid the escaping spores.



Spores Galore



The spores pour out to attack you, stringing themselves out and so making a convenient target. Turn and fire like crazy, before the little blighters overrun you.



Your feint'n'blast tactics dealt with those spores (eventually!) so now you'd better polish off the generators (small red blocks) before they build too many replacements.

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CAPTAIN AMERICA

Super heroes are GO!

CAPTAIN America, that overdeveloped specimen of *homo sapiens*, is leaping onto the screens in an attempt to save the good ol' U.S. of A from the evil Dr. Megalomann, who is threatening to launch a missile containing a very nasty genetic virus. Not a nice thing to do, so the President has called in the Captain himself to sort it out.

being attacked by various droids. The player can defend himself by flinging the Cap's shield around the platform and bouncing it off the droids. There are two different platforms to each level, and each level has varying levels of virus infestation.

The first platform has Captain America

Heroic deeds done dirt cheap.



Captain America strives to save his nation in the face of rising infection.

Doc Megalomann has built himself a base - called the Doom Tube - under the Mojave desert. The player controls Captain America as he tries to penetrate the five virus-ridden levels of the base. Each level has Captain A stood on a small platform

VISUAL EFFECTS

Well-drawn and colourful sprites

AUDIO

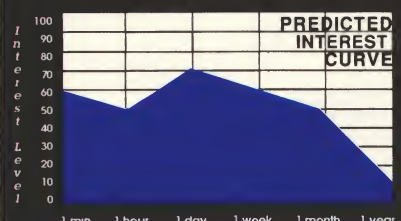
Atmospheric title tune with great effects

IQ FACTOR

Some tricky puzzles

FUN FACTOR

Tough to get in to, but has its odd magic moments



The puzzles revive your waning interest - for a while

ACE RATING 653

RELEASE BOX

C64/128	£ 9.99cs, £ 11.99dk	REVIEWED
SPEC	£ 8.99cs	IMMINENT
AMS	£ 9.99cs, £ 14.99dk	IMMINENT
ATARI ST	£ 19.99dk	IMMINENT

dodging two droids that move from the top of the screen to the bottom throwing a toxic bomb between them. If the Captain gets hit by the bomb it reduces his immunity levels. The second platform contains several ground-based droids which wizz around firing more toxic bombs. Destroy these and a large droid appears dealing death to anything that gets in the way of its shots. This large droid has to be destroyed before the player gets the code word which is needed for the final conflict with the Doc.

It's not easy to get straight into *Captain America*, but it is very easy to die - which is frustrating, to say the least. This is not a terrible game, but it's far from outstanding and it's certainly not the ideal game for GO! to be launching as an introduction to the label.

● Andy Smith

YOGI BEAR

PIRANHA give you the bear facts

JELLYSTONE Park the American home of the 'smart' cartoon bear, is the setting for Piranha's latest venture into licensed software. The player controls Yogi in his quest for poor ol' Boo-Boo, who's been kidnapped and locked into a cage by a nasty hunter.

The game starts from left to right as Yogi heads on his way to rescue Boo-Boo, a counter at the base of the screen counting down from 202 to zero to indicate proximity as Yogi closes in. There are various caves scattered along the route that can send Yogi nearer or further away from his buddy depending on which one you happen to enter.

OK, Boo-Boo



An aggravated camper is in hot pursuit of our furry chum.

A host of traps in the game will have adverse affects on Yogi. These include: geysers which spring up everywhere and can bounce Yogi back or forward a step - if you happen to be stood next to a hole or a lake then it can have Yogi losing one of his five lives. A picture of Yogi at the base of the screen slowly disintegrates as he loses energy

gy - but energy is easily replenished by collecting the picnic baskets that those large campers have left lying around.

Great every graphics add a lot of atmosphere to this extremely playable game - which is not impossible to complete. Yogi Bear will appeal instantly to younger games players, but has plenty of attraction for the old-timers too.

● Andy Smith

VISUAL EFFECTS

Cutesy and well-animated

AUDIO

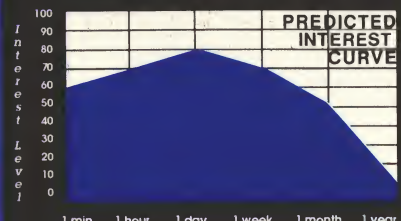
Atmospheric tunes throughout

IQ FACTOR

Bear-brains should be able to cope

FUN FACTOR

More playable than the average game!



Gets more involving the further you explore

ACE RATING 752

RELEASE BOX

C64/128	£ 9.95cs, £ 14.95dk	REVIEWED
SPEC	£ 9.95cs	IMMINENT
AMS	£ 9.95cs, £ 14.95dk	IMMINENT

PLAY... RENEGADE



Licensed from Taito Corp., 1986. Programmed for Amstrad, Spectrum, Commodore by Imagine Software.

PLAY MEAN!



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In the knife-edge world of the vigilante there is no place to rest, no time to think - but look sharp - there is always time to die! From the city subways to the gangland ghettos you will always encounter the disciples of evil whose mission it is to exterminate the only man on earth who dares to throw down the gauntlet in their path - the Renegade.

A breathtaking conversion of the arcade hit by Taito now for your home computer.

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The name of the game

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NIGEL MANSELL'S GRAND PRIX

"NIGEL MANSELL'S GRAND PRIX" is ready to take you and your computer into the fast lane of game excitement. As well as capturing the speed and adrenalin pumping danger of the world's greatest sporting spectacle, the game is the first racing simulation to reflect some of the enormous advances in car design and technology that have taken place recently.

And yet the game still offers an excellent opportunity for even the most inexperienced novice to blast round the track at excessive speeds with the turbo on maximum boost and not a care in the world for fuel consumption, tyre wear or racing line. However, for those who know, or want to know a little more, there is an opportunity to race a selection of the world's greatest circuits in the quest for valuable championship points.

The red lights are on – you snap into gear. The engine roars – your grip tightens on the steering wheel. The crowd goes wild as the lights flash to green. 900 brake horsepower is suddenly unleashed and the Williams hurtles to the first bend. Ahead of you lies 31 weeks of the world's most gruelling and spectacular sporting championship.



(Technical Consultants – Nigel Mansell, Peter Windsor, Williams Grand Prix Engineering Ltd.)

Nigel Mansell celebrating victory.

Just over half the race completed and you're lying second to your main rival – 0.8 seconds ahead of you.



Your pit crew are in constant contact with you throughout the race.

Correct gear selection is vital.

Use your Turbo for extra power – but watch that fuel.

This panel gives you vital information on your race performance.

Wing mirrors. No sign of the third place car yet!



Produced by
martech

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Spectrum 48/128 Cassette £9.99
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PATROL Hydrofoil Missilecraft are super-fast torpedo boats that skim across the surface of the water with hydrofoils attached to their hulls. As commander of one such craft – The Pegasus – it's your task to successfully complete eight missions, which can be attempted in any order.

Two screen displays can be changed between at the touch of a button. The first is your operations map showing your present position relative to the surrounding shoreline, which varies depending upon your mission. This map also shows a circle around your ship(s) indicating the radar range of your vessel.

The second display is the main control screen, occupying the bottom 2/3rds of the screen. This display is split horizontally in two with the bottom half being taken up with your weapons on the right, a radar in the middle (the range of which can be altered from 2.5 miles up to 40 miles) and two elevations of your boat each divided into boxes which turn red if you're hit in order to show the damaged areas.

The top part of this display shows the sea stretching out ahead of you. The very top third of the screen only becomes filled when you press the T (for target) key; any nearby likely targets (ships or helicopters) appear in a 'through the binoculars' view with an arrow indicating the direction in which you need to move to be directly in front of them.

If you should decide to attack the enemy then pressing the space bar takes you out of manoeuvre mode and puts you in aiming mode. A cross-hair sight of the enemy appears on the binocular view; position this sight and fire.

Your choice of weapons includes a cannon, chaff rockets fired to decoy enemy mis-

siles, and your very own Exocet missiles. Strangely you can't fire missiles at anything that's on your side but you can blow them up with the cannon.

The objective for each mission varies; it can include sinking all enemy terrorists or just escaping from a war zone with as little damage as possible. Each mission has a time limit of anything from 2 to 48 hours, depending upon the main objective. Thankfully, PHM Pegasus features a time compressor which can speed time along up to 128 times faster than normal.

Again depending upon your scenario



The operations map varies for each scenario; it lets you keep an eye on all your forces and shows their radar ranges.

PHM PEGASUS

Hydro-foiling terrorists with ELECTRONIC ARTS

you might have the aid of a number of other PHM's or helicopters which you can send on search missions independently of your own craft.

The game has some really good graphics (shells exploding in the water sending a geyser-like fountain up into the air) and the

screen layout is well designed; but the emphasis is certainly on action, and very hectic it can get at times. Simulator fans may find it's a smidgeon too simplistic to satisfy them but for action fans it's a real treat.

● Andy Smith

RELEASE BOX

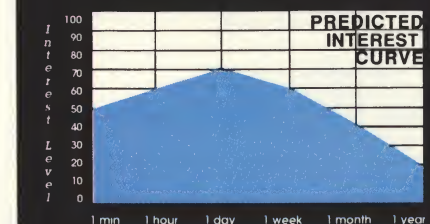
C64/128	£9.95cs, £14.95dk	REVIEWED
SPEC	£8.95cs,	NOV 87
AMS	£8.95cs, £14.95 dk	NOV 87

VISUAL EFFECTS ■■■■■
Good screen design with well-drawn vessels

AUDIO ■■■■■
Droning engines, but good gunfire

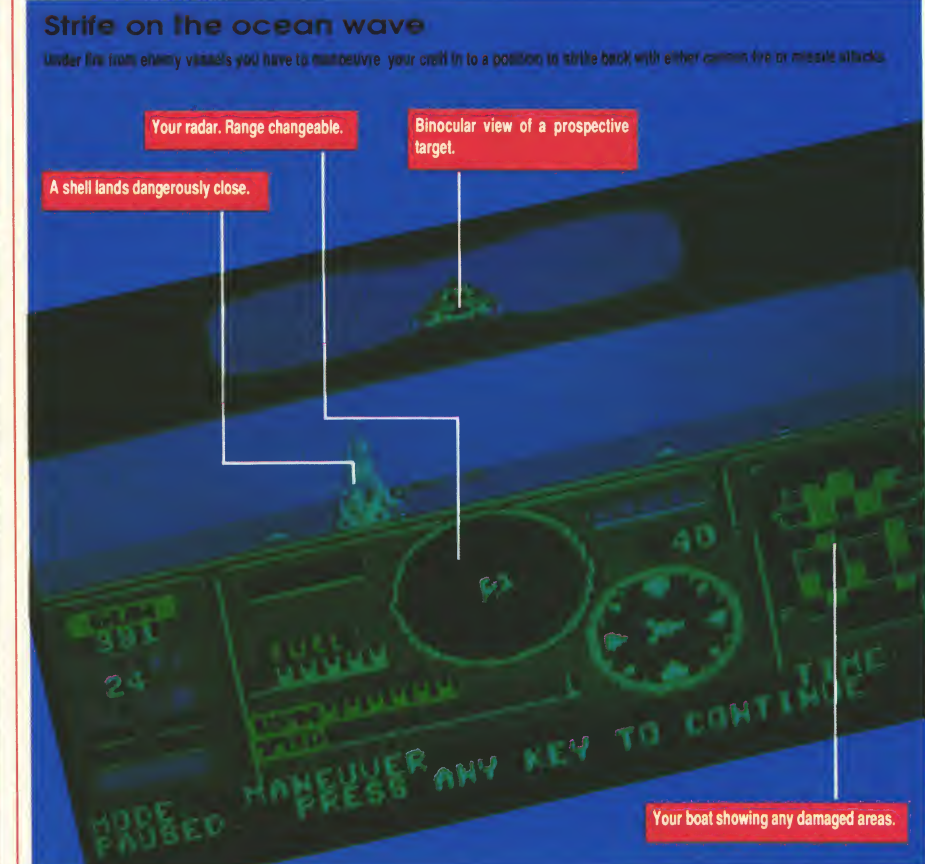
IQ FACTOR ■■■■■
Strategy called for at times

FUN FACTOR ■■■■■
Emphasis more on action than simulation



Blasting good fun for quite some time

ACE RATING 831



COLIAN, despite sounding like part of one's intestines, is actually a mineral-rich asteroid stuck on the edge of System 7 – wherever that is – which has fallen into the hands of some rather nasty aliens, collectively known as The Empire. These aliens are using the manufacturing plants on the asteroid to build their terrifying

one of six commodities. These include: Detonite, which is used to blow up the Terrorpods; Alumna, which is your means of buying the Terrorpod components; Fuel Rods, which you need to power your D.S.V. (Defense Strategy Vehicle) which is what carries you around the surface of the asteroid.

In order for the complex manufacturing

TERRORPODS

Tripod trouble from PSYGNOSIS

war machines known as Terrorpods. You were sent to the asteroid to foil their plans, but unfortunately you were discovered (you nerd) and so The Empire are now using the Terrorpods to destroy the installations and small mechanical devices known as Spoilers to drain the installations of their vital commodities.

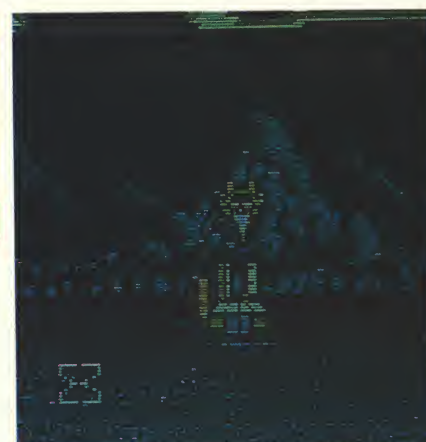
The object of the game is to trade with the various installations in an attempt to gain six vital parts of Terrorpod that are under construction. If you manage to get all six then you can build yourself your very own Terrorpod with which you can attempt to destroy all the other Terrorpods.

Trading with installations involves using your surface Drover – a small buggy – that is controlled from the keyboard and aimed towards an installation. Having reached an installation you can then select to trade for

chain to continue making the vital Terrorpod parts, you have to ensure that no link is missing. A manufacturing plant can't operate without fuel and they can't get fuel if the fuel mines have been destroyed. Also, the price of the resources varies and this is where your trading abilities are put to the test. The idea is to buy and sell commodities and make enough profit to ensure you never run out of resources.

Terrorpods boasts some very impressive graphics and sound effects. The explosions are colourful and vivid and the scrolling is very well achieved, with smooth animation. The screeches when you fire your lasers are piercing. *Terrorpods* is an impressive game that will keep the player involved for a long time, but there are some annoying points – guiding a missile is unnecessarily difficult and it's initially very hard to get your bearings. If you like your strategy spiced with the chance to blast the odd alien then *Terrorpods* could be worth a look; if you prefer your blasting spiced with the odd chance to think then you could well get frustrated and, eventually, bored.

● Andy Smith



The shuttles keep the various installations supplied with the necessary resources so they can produce the all important Terrorpod pieces.

Shoot-em-up?

Terrorpod's trading elements are complicated and absorbing, but the blasting side of things is slightly unusual – manic action fiends should ponder before they buy. You have two weapons at your disposal; lasers and missiles. Lasers can be let off at any time and are aimed with cross-hair sights controlled by the cursors. The problem with lasers, though, is that they don't actually destroy anything – except your own installations, if you're foolish enough to shoot them. If you laser a Terrorpod it merely folds itself up and nips back to the mother ship, only to return a little later. To definitively waste anything you need to use your missiles.

These are tricky things; you have to press E to load your warhead, then A to summon the guidance screen, the SPACE to launch the missile and then use the cursors to keep the 'drift indicators' within the sights. Sounds complicated? It is, and even playing for quite some time is unlikely to make you in to a hotshot. Bear in mind, too, that both lasers and missiles use up Detonite – so don't go gun crazy.

RELEASE BOX

ATARI ST	£24.95	REVIEWED
AMIGA	£24.95	IMMINENT

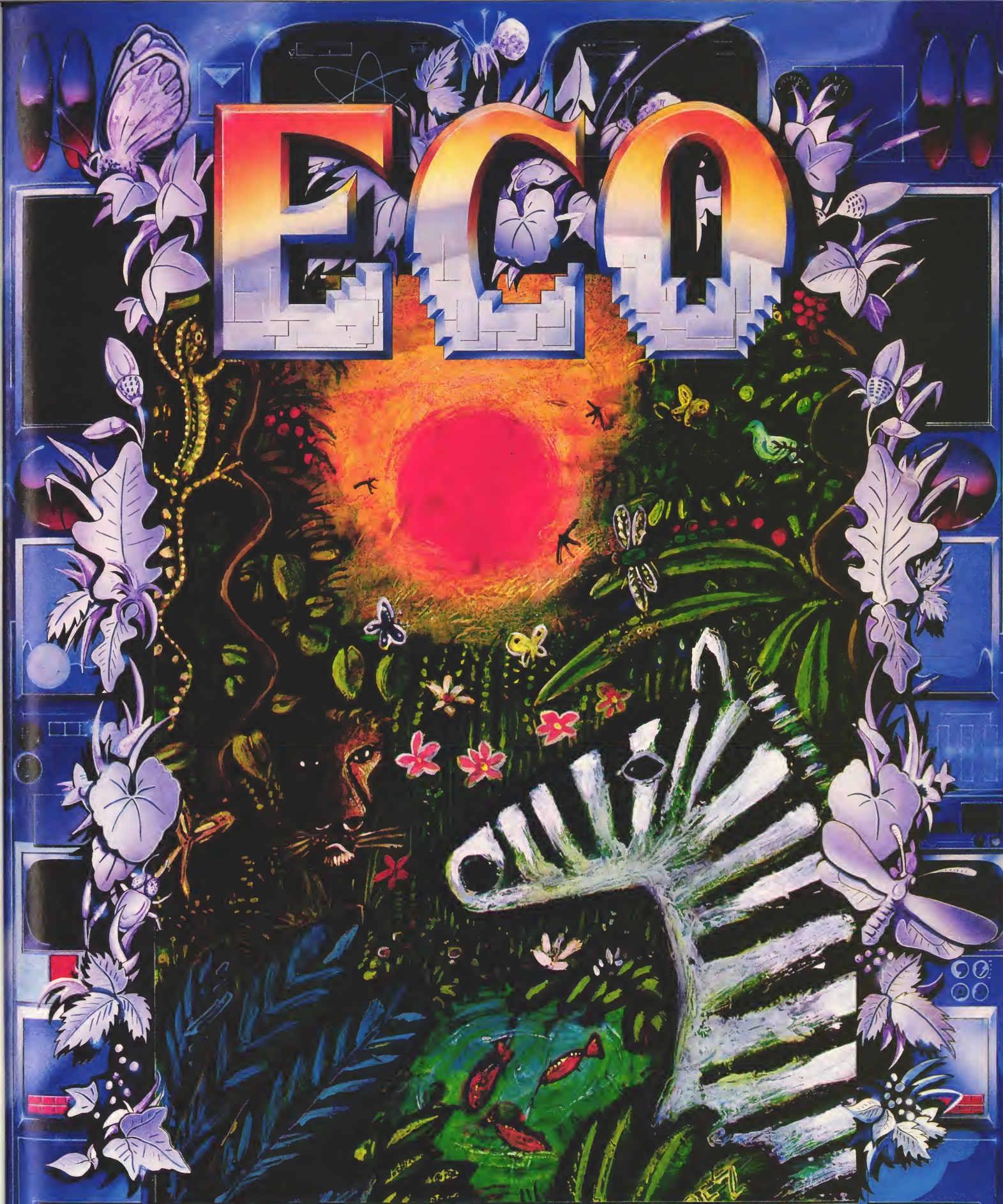
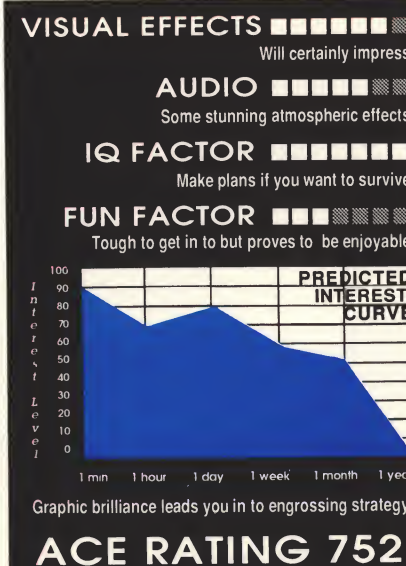
Die terrorpod!

The missile firing stage, it's tough to keep the wandering drift indicators on target.

Your fuel level. Detonite remaining.



Countdown to missile strike. The drift indicators. The manufacturing installations.



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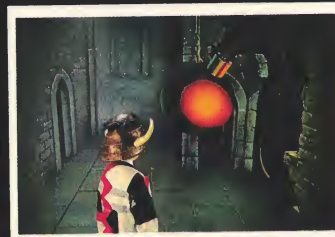
Knightmare the computer game uniquely combines the best elements of traditional adventuring with some hot arcade action and provides puzzles and riddles of a varying nature not found before in computer games.

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ACTIVISION

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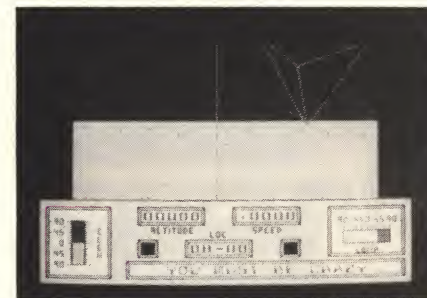
When you want to find out if those 'real soon now' games have finally made it on to your machine, this is the place to look. The **ACE Updates** pages bring news, mini-reviews and ratings of the latest conversions – and if we've reviewed the game on another machine you'll find a reference to the issue and the earlier rating. Don't be caught out by a duff changeover; consult these pages before you break the bank.

SPECTRUM

MERCENARY
Novagen £9.95cs

Finally the old Atari and C64 classic hits the Spectrum. The game delivers no surprises but still has all the fast, smooth wire-frame graphic action that made the original such a winner.

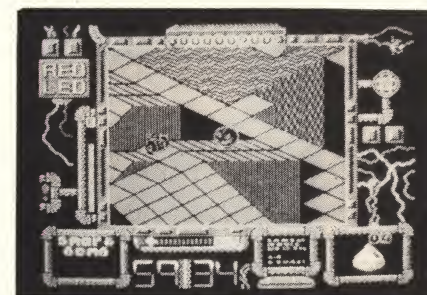
This game will have you glued to the screen as you fly around the city or explore the maze of passages underground and would form a worthy addition to any Spectrum owner's software collection.



● ACE RATING 870

RED L.E.D.
Starlight £8.99cs
Commodore version reviewed Issue 2 - ACE Rating 910

The wonderful *Marble Madness* clone that was reviewed on the C64 in *ACE* issue 2. The Spectrum version turns out

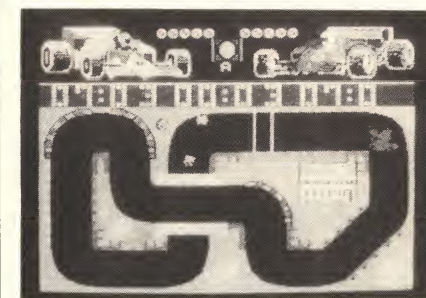


to be just as playable and just as much fun. The graphics are superb and the gameplay is compelling. *RED L.E.D.* certainly deserves the original high rating.

● ACE RATING 910

GRAND PRIX SIMULATOR
Code Masters £1.99cs

The Oliver twins' Midas touch is bound to misfire occasionally, and here's a case in point. A viewed-from-above racing game, *GPS* suffers from small blobby car sprites and very unrealistic cornering. Cars crab desperately round bends, giving the game a distinctly *Thrust*-ish flavour (not to mention an air of silliness). Bright enough and quite enjoyable in its way, but even at five times the price *Super Sprint*'s still worth a look.



● ACE RATING 732

C64/128

SUPER SPRINT
Activision £9.99cs
Spectrum version reviewed Issue 2 - ACE Rating 907

Super Sprint has lost none of its playability in conversion to the C64. There are only three cars in the race this time and that means only one computer car if

there are two players; but competition is still as hot as on the Speccy. Graphics and sound have been improved though the tracks now load in two sets of four, but this is only a minor irritation and doesn't affect its addictiveness.



● ACE RATING 917

ATARI ST

RANARAMA
Hewson £19.95dk

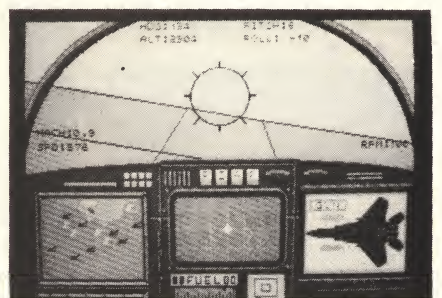
Of all the *Gauntlet*-ish overhead view magical shoot-em-ups, this was most people's 8-bit favourite - and rightly so. Now ST owners can join in the frog-featured frenzy, blasting nasties and wrestling warlocks through even brighter and better-looking dungeons. Very addictive, and cripplingly difficult.

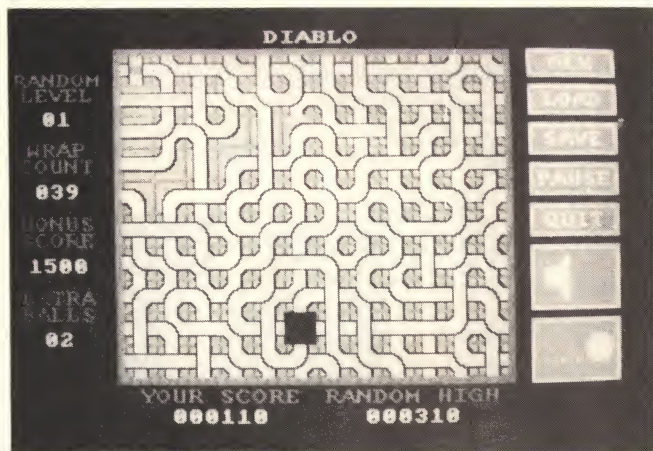
● ACE RATING 890

F-15 STRIKE EAGLE
Microprose £24.95dk

With solid 3D graphics and a glowingly beautiful title screen, ST *Strike Eagle* easily outshines its 8-bit counterparts and arguably wins the ST combat simulation crown – for the time being, at any rate. Politics aside, the game's graphics are on the slow side now and could look, perhaps, very pedestrian in six months' time.

● ACE RATING 815





DIABLO

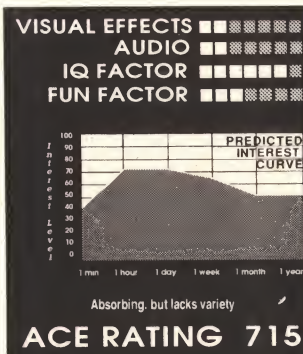
DIAMOND keep the ball rolling

OLD game ideas return to haunt new machines: here, you shuffle a screenful of blocks round so that the track sections on them form a continuous path for the rolling ball. The track sections disappear as the ball passes over them, so there's less and less margin for error as the game progresses. Keep the ball rolling

until all the track is used up and you get more of the same, only the ball moves faster.

If you never played this type of game first time round you'll find it pushes your mental agility quite hard – but that's more than it does to the Amiga.

● Andy Wilton



RELEASE BOX		
AMIGA	£19.95dk	REVIEWED
ATARI ST	£14.95dk	IMMINENT
C64/128	£7.95cs, £9.95dk	IMMINENT

ANGLE BALL

Crazy pool from MASTERTRONIC

PLAYED on a hexagonal table with six pockets, this basic pool game has the player competing against the computer or a friend in an attempt to win 20 different frames.

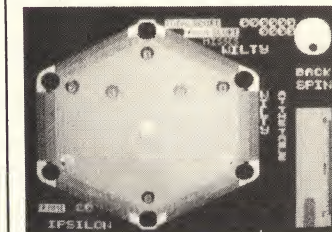
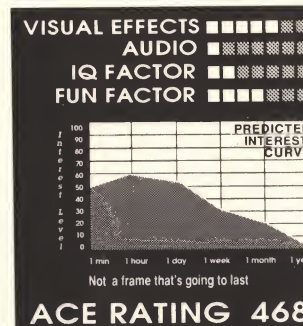
The computer opponent has three skill levels; on the easiest level he rarely manages to pot a shot but on the third level he rarely misses. When you line up for a shot you get the chance to use a variety of spins on your cue ball in an attempt to line up

the next shot.

As a variant on a clapped out theme Angle Ball is not at all bad, it's different enough to keep you playing for a short while at least.

● Andy Smith

RELEASE BOX		
C64/128	£1.99cs	IMMINENT
SPEC	£1.99cs	REVIEWED
AMS	£1.99cs	IMMINENT
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CLEAN UP SERVICE

Good clean fun from PLAYERS

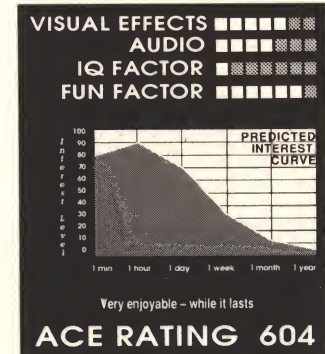
FILTH eradication is the name of the game in this cute and very playable one or two player budget title. You play either Otto or Bobban, mole-like creatures who have been given their big chance as cleaners by the manager of the disgustingly filthy Addle Hotel. There are eight

increasingly dirty – and, therefore, difficult – levels, starting in the entrance hall and working up to the haunted attic.

On each level you must avoid the mobile garbage and make it to a box containing a number of items to help you get the job done. The key objects are dustbin lids, which will pen in the filth, but you can also make use of stun guns and brooms to flatten the dirt, as well as other clever gadgets. The game has a pretty old-fashioned feel to it, but is graphically accomplished and delivers its fun instantly and in sufficient doses to make it well worth a gander.

● Pete Connor

RELEASE BOX		
C64/128	£1.99cs	REVIEWED



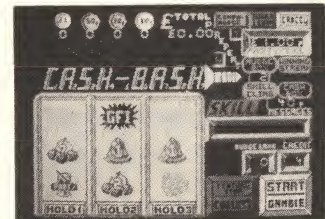
FRUIT MACHINE SIMULATOR

Can CODE MASTERS hold your plums?

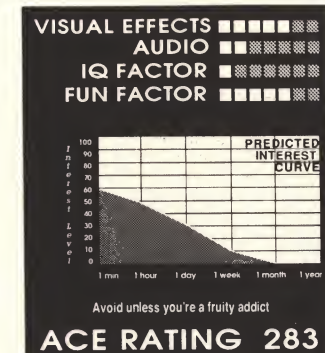
THEY'RE all there, the familiar features that are loved by the fans of this sort of coin-op – the Cash Box, the Nudge features, the Feature Holds etc.

It's very well put together, with the spinning reels being very well animated and colourful. For up to four players, Fruit Machine Simulator could provide you with a lot of entertainment if you're a real fruit machine freak – just think, you don't have to put any money in! Of course, you never win any money either so you would have to be a real.

● Andy Smith



RELEASE BOX		
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SPEC	£1.99cs	REVIEWED
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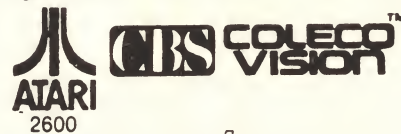
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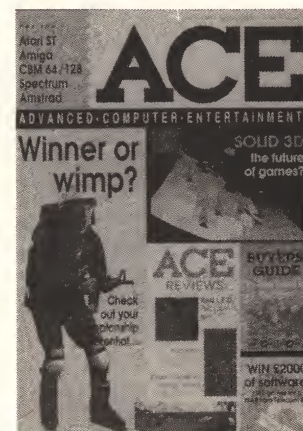
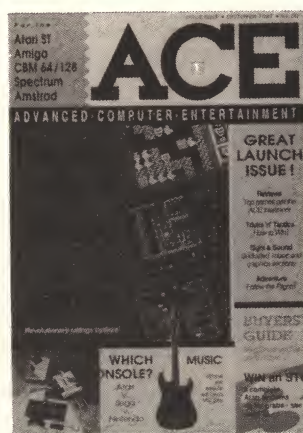
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OF STRATEGIC IMPORTANCE

Here comes a time in every game player's life when he looks at his collection of arcade and adventure games, he looks on the shelves of the local software shop, and he asks himself 'Do I really want to spend another 10 quid on the latest horizontally-scrolling shoot-em-up?'

It doesn't happen to all of us, but those who have endured this period of transition know that either the computer has to be slung to the bottom of the wardrobe and or else you have to start looking for an alternative class of game that will provide the sort of challenge you're secretly craving. Enter the strategy game...

Most computer games are more concerned with tactics than strategy. If you're unclear what the difference is, tactics involves the development of appropriate responses to the opposition's manoeuvres during battle, whereas strategy is the process of developing a plan for securing overall victory. In your typical shoot-em-up, tactical operations are the order of the day as you learn how to dodge and destroy the opposition. Strategy is unnecessary for the simple reason that the enemy has no strategy - they just keep coming, and thus all you need to do is keep blasting.

Things are very different, however, when you're up against someone like Napoleon at Waterloo, or an ingenious alien commander who understands just what you're after and is exercising every ounce of your micro's CPU to bring about your downfall. In games like these, strategic thinking is essential

and the effort can bring a degree of involvement far beyond the average search-and-destroy mission to Alpha Centauri.

Are you up to the challenge? Let's face it, anyone can shoot aliens. The sort you come across in games haven't exactly got much in the brains department. How would you make out if your opponents started showing a bit of initiative? Imagine your response if a run-of-the-mill space invader suddenly stopped dropping bombs, sent a detachment round to the bottom of the screen, neutralised your laser, and demanded your immediate surrender. Would you have a response? Could you cut the crumpet against a real invading army, its generals, its commander-in-chief? Now's your chance to find out...

...

ANNALS OF ROME
PSS

Spectrum	£12.95 cs
C64/128	£12.95 cs £17.95 dk
Amstrad	£12.95 cs £17.95 dk
Atari ST	£24.95 dk

A biggie this one. It starts in the year 273 B.C. and can continue indefinitely as the player struggles to keep his ever-expanding empire together whilst under threat from up to 13 hostile powers. Each game turn covers a period from one to 25 years and is composed of several sub-sections which allow the player to make strategic decisions concerning economics, personnel assignments and foreign or civil wars.

There is so much to this game that it will take you a long

Fed up with mindless blasting? Want an opponent worthy of your skills? The chance to develop your own campaigns for conquest and colonisation? Andy Smith presents 15 games that will really test your mettle on the battlefield.



time to get to grips with it, but it is well worth persevering with because the amount of available options makes it very involving to play and no two games will ever be exactly the same. For the solo wargamer it's a must, but prepare yourself for long involved sessions. Thankfully the SAVE GAME option is available at the start of each turn, so you can carry on with the campaign whenever you have the time to spare.

OPPOSITION ■■■■■■
DISPLAY ■■■■■■
EASE OF USE ■■■■■■
GAME DEPTH ■■■■■■
ACE RATING 850

ARNHEM CCS

Spectrum £8.95 cs
Amstrad £9.95 cs
C64/128 £9.95 cs

This one, two or three player tactical wargame is based on the 'Market Garden' operation of 1944. Montgomery's plan was to rid Holland of the Nazis and open the door to Berlin. Three allied airborne divisions were dropped behind enemy lines and attempted to capture a series of bridges for the advancing allies.

The game contains five separate scenarios, each lasting a fixed number of turns. Each day of the campaign is made up of three turns (morning, afternoon and night) and each turn is divided into three phases. The first is the mechanical phase in which motorised units can move and engage in combat. The second phase is when other units can move, and the third phase is another mechanical phase.

Despite its age *Arnhem* is still one of the toughest, most atmospheric and involving wargames you could wish to own, and it set its author R.T. Smith on the road to fame and - who knows? - fortune.



OPPOSITION ■■■■■■
DISPLAY ■■■■■■
EASE OF USE ■■■■■■
GAME DEPTH ■■■■■■
ACE RATING 910

BALANCE OF POWER Mindscape

Amiga £29.95 dk
Atari ST £29.95 dk

For 16-biters, *Balance of Power* is the definitive strategy game. The player takes the role of one of the Superpowers while either the computer or a friend takes control of the other. Then it's a case of trying to win friends and influence people on a global scale. This can be achieved in a number of ways including supplying arms and financial aid to radical factions in the hope of toppling a government that is not receptive to either the great American or Russian dream

(which ever colour you happen to be playing.) It's complex, it's involving, it's certainly thought-provoking and it's difficult to play in ten minute sessions. Set aside a lot of time and you'll get a lot of enjoyment from the game. Absorbing stuff that gives an insight into the devious world of Geopolitics.

OPPOSITION ■■■■■■
DISPLAY ■■■■■■
EASE OF USE ■■■■■■
GAME DEPTH ■■■■■■
ACE RATING 950



Strategic scores

We've come up with a special rating system for this section to make sure you can choose your strategy game with confidence. Here's how we sort the neat from the naff...

OPPOSITION

This is of utmost importance - to solo strategists especially. It is an assessment of just how intelligently the computer reacts to any moves you make during the course of the game. It also takes into account how well the computer handles its forces in an attempt to win the game. The addition of varying levels of play will win a game points in this category only if the computer appears to adopt a more aggressive attitude on the higher levels.

DISPLAY

Forget the packaging, this category deals with how well designed the on-screen display is. As is often the case with strategy games, you're going to sit in front of the screen for a considerable amount of time and a poorly designed screen with minute text or glaring colours can ruin an otherwise enjoyable game. The manner in which information is displayed can also earn points in this category - well-designed maps and status screens can help a player devise more effective strategic policies.

EASE OF USE

This is a direct reflection on the game's operating system and how user-friendly it is. If the player has to wade through a whole series of game phases to change a single order, then it can become extremely tedious. How easy the player is able to follow what exactly is happening in the game is also considered in this category.

GAME DEPTH

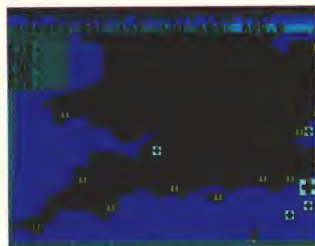
The major consideration here is just how far the game strives to involve the player and provide for varied challenge. The ability to alter a game's parameters or the addition of 'what if' options can turn an otherwise worn-out game into an exciting challenge full of new opportunities. The packaging is included in this category as scene setting can help to give the game atmosphere - and the addition of historical notes, photographs and diagrams all help to transport the player from the armchair to the battlefield.

BATTLE OF BRITAIN PSS

Spectrum £9.95 cs
C64/128 £9.95 cs £14.95 dk
Amstrad £9.95 cs £14.95 dk

Take control of Fighter Command during WW2 in this solo wargame featuring three separate scenarios. The computer assumes the role of the operations room as the player attempts to stop the invasion of Britain by the German Luftwaffe. You have to consider several factors when deciding upon which course of action you should follow, including airstrip availability, ammunition levels and flying times. Again PSS have included an optional arcade sequence which puts you into the cockpit of a Spitfire so you can dog-fight with Jerry over the Channel.

While the game boasts three scenarios, the first is meant merely as an introduction to the game for the player to familiarise himself with the games' mechanics and the second is a simulation of an all-out attack



by the Luftwaffe. But the third scenario covers 30 days of the actual battle and is as historically accurate as is possible within the constraints of game play.

An enjoyable challenge that should be on your shopping list, especially as it's now available on the Classic Conflicts label for a fraction of the original price.

OPPOSITION ■■■■■■
DISPLAY ■■■■■■
EASE OF USE ■■■■■■
GAME DEPTH ■■■■■■
ACE RATING 830

BATTLEFIELD GERMANY PSS

Spectrum £12.95 cs
C64/128 £12.95 cs £17.95 dk
Amstrad £12.95 cs £17.95 dk

This one or two player wargame is set just in the future and simulates a conflict between NATO and the Warsaw Pact in Western Europe. Sounds like another PSS game? Well yes, the scenario is



the same as the other PSS great *Theatre Europe*, but this game differs in a multitude of ways.

Played on a map divided into hexagonals, the play alternates with each game turn being roughly divided into three. The first phase of the turn is the Supply Phase when the computer calculates the amount of supplies that your forces can receive. It takes into account whether a clear line can be drawn back to the supply points - if that line passes through enemy held territory then the supplies just won't arrive. The next phase is the optional Nuclear phase, which gives the player the chance to use nuclear warheads on a tactical or strategic level. Next comes the action phase, this can be subdivided into three minor phases including movement, airborne movement and the attack phase. The introduction of the hexes brings a real board wargame feel to the computer, and as such it is very good. Stretches your tactical planning ability whilst remaining thoroughly playable.

OPPOSITION ■■■■■■
DISPLAY ■■■■■■
EASE OF USE ■■■■■■
GAME DEPTH ■■■■■■
ACE RATING 820

DESERT RATS CCS

Spectrum £9.95 cs
Amstrad £9.95 cs

The follow-up to the ever popular *Arnhem*, also written by R.T. Smith. *Desert Rats* is a one or two player wargame covering the campaign in the western desert from the arrival of Rommel in



Setting the scene....

If you always thought a strategy game is a strategy game is a strategy game then you could not be more mistaken. Scenarios vary widely, as does the quality with which they are implemented. Some games attempt to cover too much ground and consequently leave the player with the feeling that he is not really in control of events while others concentrate too much on nit-picking details that can impair a player's strategic thinking. The good strategy game will strike a balance between the two.

Ideally, you should be able to make as few or as many decisions in a game as you wish - a good example of this is *Balance of Power*. Many games strive toward this ideal and will allow the player to choose the weapons used, the arrival point of reinforcements, the amount of ammunition available and so on. This is the level of involvement you should be looking for.

Finding a game with the correct level of detail is difficult - hence this guide - and even then you'll find great variation in the designs of different programs. The usual format is to have the player controlling one force, with all orders issued to the various units before a button is pressed. The computer then calculates the results of the actions, moves the symbols on the screen and calculates the outcome of any ensuing combat. Then there's a pause while the computer makes its move, after which it's your turn again. Examples of this sort of game include *Vulcan*, *Napoleon at War*, and *Yankee*.

A lot of games have separate phases (for example, a 'supply' and 'attack' phase); these are dealt with in a set order and they go together to form the game 'turn'. *Theatre Europe* and *Battlefield Germany* both take this approach. Other games will deal with the units one by one, with all the moves and combat for that particular unit being dealt with before the player moves onto the next unit. *Rebelstar* is a good example of this latter category. There are advantages and disadvantages to each system, and a lot depends on the particular player's own personal preference. You'll soon find the system that best suits your own style of playing.

Tripoli to the final battle for El Alamein.

The same ordering system that was used in *Arnhem* is used again in *Desert Rats*, and why not? It is simple, efficient and very easy to work with. *Desert Rats* is a tough game to win and you're sure to spend a long time trying.

OPPOSITION ■■■■■■
DISPLAY ■■■■■■
EASE OF USE ■■■■■■
GAME DEPTH ■■■■■■
ACE RATING 905

DOOMDARK'S REVENGE Beyond

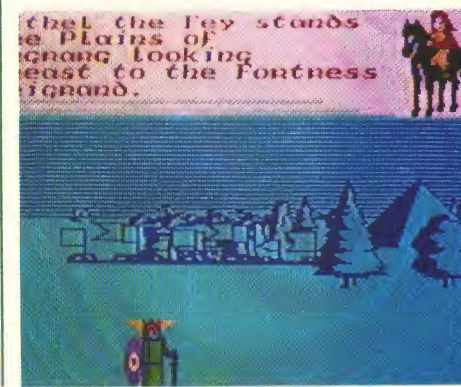
Spectrum £9.95cs
C64/128 £9.95cs
Amstrad £9.95cs

The sequel to the classic *Lords of Midnight*, written by the same author - Mike Singleton.

Following the defeat of Doomdark, his daughter (Shareth the Heartstealer) threatened to invade the peaceful lands of Midnight. Luxor set forth to the lands of the Ice mark to rescue his son Morkin and defeat the evil Shareth. The ordering system and game concept is the same as used in

Lords of Midnight, but the game was greatly enhanced by the addition of several warring factions, from which the player has to recruit his armies. Although you could see a lot of *Lords of Midnight* in the game mechanics, *Doomdark's Revenge* plays completely differently and is certainly a worthy successor. All that remains now is to see whether Mike Singleton can ever find the time to write that promised third part of the trilogy *Eye of the Moon*.

OPPOSITION ■■■■■■
DISPLAY ■■■■■■
EASE OF USE ■■■■■■
GAME DEPTH ■■■■■■
ACE RATING 940



JOHNNY REB 2 Lothlorien

Spectrum £9.95 cs
C64/128 £9.95 cs
Amstrad £9.95 cs

This one or two player wargame makes a greater attempt to capture the flavour of the American Civil war, rather than accurately re-create a battle. The player is allowed to alter a variety of the game's parameters including which side you control, when reinforcements should arrive, the battlefield terrain and more.

Johnny Reb II is definitely a worthy successor to the original *Lothlorien* game and is certainly deserving of a closer examination.

OPPOSITION ■■■■■■
DISPLAY ■■■■■■
EASE OF USE ■■■■■■
GAME DEPTH ■■■■■■
ACE RATING 840

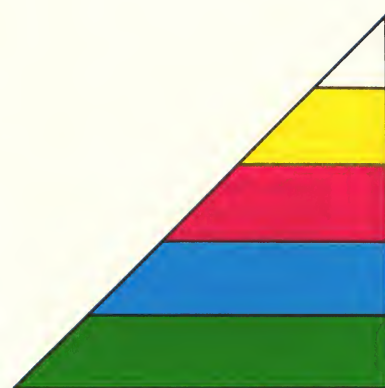
LORDS OF MIDNIGHT Beyond

Spectrum £9.95cs
C64/128 £9.95cs £11.95dk

A fantasy wargame that can be played either as a wargame or as a graphic adventure. The best way to play the game is to combine the two separate elements and play as one epic.

The wargame aspect is by far the most testing and enjoyable. It involves the player controlling four characters (at the start) independently. They must scour the lands of Midnight and try to recruit the various lords in an attempt to form a large enough army to defeat the evil Doomdark, who is resident in the Citadel of Ushgarak.

This is when the strategy comes into play, as attrition plays a major part in reducing an army's fighting ability and the player must see that his forces are kept in fighting order before planning the final tactical assault on the citadel. One of the most involving and atmospheric fantasy wargames you could hope to play, and unusual in its use of 'landscaping' - a method of presenting a view of the terrain in all directions, giving the player 32000 possible panoramic displays!



The Worlds Finest Strategy Games

SPECTRUM

Swords & Sorcery
Falklands '82
Iwo Jima
Battle for Midway
Battle of Britain
Theatre Europe
Tobruk
Bismarck
Annals of Rome
Battlefield Germany
Pegasus Bridge
Sorcerer Lord
Conflicts 1
Conflicts 2

APPLE II

Theatre Europe

IBM PC

Annals of Rome

CBM 64

Falklands '82
Iwo Jima
Battle for Midway
Battle of Britain
Theatre Europe
Tobruk
Bismarck
Annals of Rome
Battlefield Germany
Pegasus Bridge
Sorcerer Lord
Firezone
Fortress America
Final Frontier
Conflicts 1
Conflicts 2
Power Struggle
Okinawa

AMSTRAD CPC

Swords & Sorcery
Battle for Midway
Battle of Britain
Theatre Europe
Tobruk
Annals of Rome
Battlefield Germany
Pegasus Bridge
Sorcerer Lord
Firezone
Conflicts 1

ATARI ST

Annals of Rome
Fortress America
Final Frontier
Battlefield Germany

Dark Sceptre

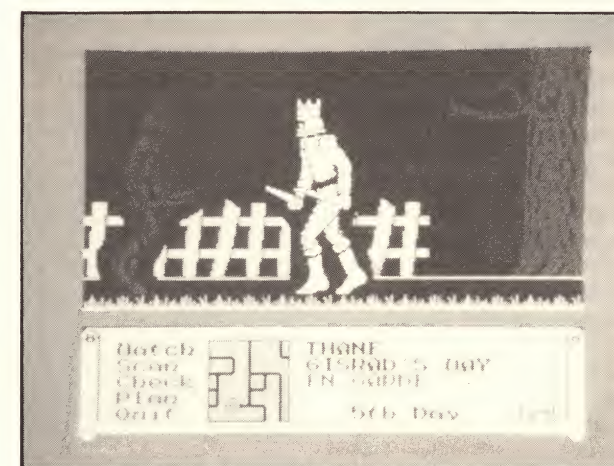
Mike Singleton of *Lords of Midnight* fame has just completed his latest game, *Dark Sceptre*. Like most of his previous releases, it takes several strategy elements and gives them a new twist to produce a promising game with a tremendous display and complex gameplay.

The *Dark Sceptre* has been stolen, and as a noble Thane (leader) you must retrieve it by issuing orders to your retainers and allying with other Thanes within the game. There are six different character types, Thrall; Reaper; Assassin; Fool; Mystic; Savage; Thane; and Herald. Each type has its particular abilities and characteristics, and each individual character has a set of eight attributes.

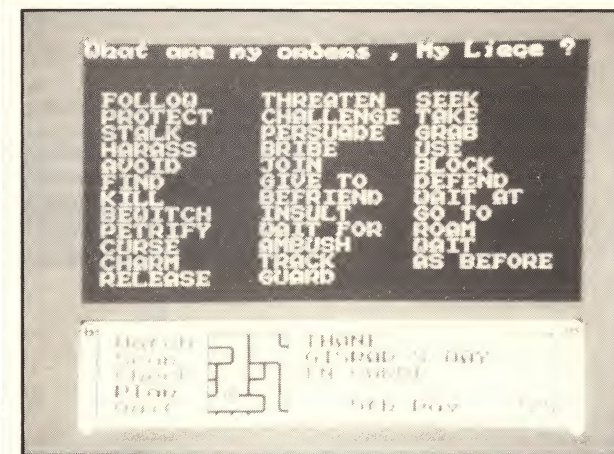
There are three principal display modes - a map of the land; the commands menu; and a display of the current location. The latter shows a horizontally scrolling landscape with the figure(s) present depicted in very large, smoothly animated sprites.

During the game you select characters and issue them with orders, which they will then proceed to carry out to the best of their abilities while you get on with organising the others. Fights are frequent and good use of sound is made to indicate that a fight has begun (in which case you have an option to view it) or that an enemy or neutral character has joined your side.

Some characters can accept up to three orders at once, which they will execute in succession (if they are up to it), so you could, for example, tell an Assassin to: **GO TO CYMRIL'S FORK: KILL ENEMY THANE: WAIT** and he would then go about his business. There are approximately 60 independent characters within the game, and getting to know their strengths and weaknesses as well as carefully orchestrating their manoeuvres is essential for success. There is no random element involved, so success or failure is entirely up to you.



The location display screen. Sprites move slowly, but the animation is good and colour-clash on the Spectrum is avoided by giving each sprite a black border.



There are approximately 30 different commands, which can be given to any character and which can be made to involve any third party. The only important exception are magical commands, which can only be carried out by a Mystic.

OPPOSITION ■■■■■
DISPLAY ■■■■■
EASE OF USE ■■■■■
GAME DEPTH ■■■■■

ACE RATING 950

REBELSTAR Firebird.

Spectrum £1.99 cs
C64/128 £1.99 cs
Amstrad £1.99 cs

Originally released by Red-Shift as *Rebelstar Raiders*. Firebird bought the game, re-vamped it and re-released it as *Rebelstar* before it achieved the success it so richly deserved.

The player takes charge of ten or so raiders in an attempt to destroy the Isaac computer at the heart of Moonbase Delta. Either the computer or a friend can be chosen to play the part of the defenders. The playing system is very easy to use and involves selecting a member of your team who has a certain amount of Action points; these are used up depending upon what you want the character to do. Simply moving your

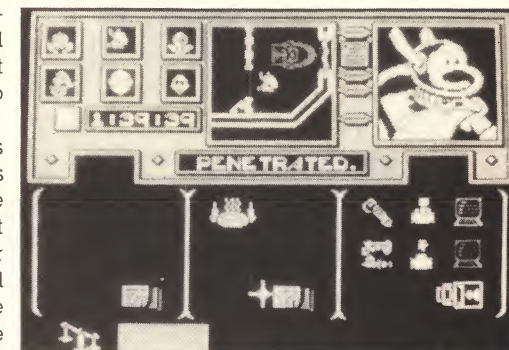
OPPOSITION ■■■■■
DISPLAY ■■■■■
EASE OF USE ■■■■■
GAME DEPTH ■■■■■

ACE RATING 900

character to the left or right will cost far fewer action points than an aimed shot at a target will, so how you spend each character's action points each turn can become very tricky indeed. A simple game to play but one that is very hard to put down - or win.

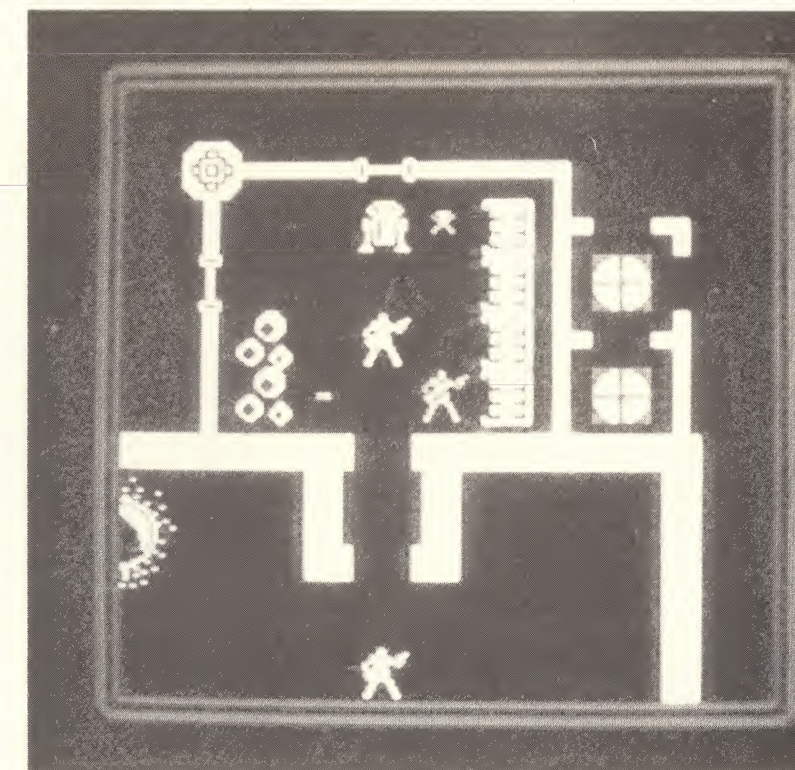
SHADOWFIRE Beyond

Spectrum £9.95cs
C64/128 £9.95cs £11.95dk
Amstrad £9.95cs £14.95dk



This strategy game was one of the first icon-driven strategy games and is still one of the best. The player takes charge of six characters collectively known as the Enigma Force, and uses them in an attempt to rescue the ambassador Kryxix who is being held on board the spaceship Zoff 5 by that scoundrel General Zoff.

Each character is ordered separately by means of icons from various menus that can be



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called up, i.e. the battle menu allows the player to choose to attack, defend, retreat etc and the movement icon lets the player decide in which direction the character should move. The various characters all have different characteristics that are peculiar to them and the player has to use each team member's special ability at key points in the game in order to survive. Played against a very tough time limit, *Shadowfire* requires the player to react swiftly under pressure and employ all his tactical ability. A great game to play that is a real challenge. It is a pity that the sequel, *Enigma Force*, is a completely different sort of game which is not as half as enjoyable as *Shadowfire*.

OPPOSITION ■■■■■
DISPLAY ■■■■■
EASE OF USE ■■■■■
GAME DEPTH ■■■■■
ACE RATING 890

VULCAN
CCS
Spectrum £9.95 cs
Amstrad £9.95 cs

The latest game from R.T.Smith, following firmly in the footsteps of *Desert Rats*. *Vulcan* covers the Tunisian campaign from November 1942 to the end of May 1943. Again the same ordering system is employed, but this game boasts a much larger playing area than the other two games, allowing greater scope for the player. Also, an air attack phase has been added to drive home the

importance that air cover played during the real campaign. With the computer or a friend playing one side (either Allied or Axis) the game is no pushover and will keep you absorbed for a long time.

OPPOSITION ■■■■■
DISPLAY ■■■■■
EASE OF USE ■■■■■
GAME DEPTH ■■■■■
ACE RATING 930

NAPOLEON AT WAR
CCS

Spectrum £8.95 cs

A one player wargame based on the Napoleonic battle of Eylau. The player takes charge of the French forces while the computer plays the part of the Russians and Prussians.

The player controls the battle by issuing orders either directly to the units individually or to the Corp Commanders, who will either carry out your orders to the letter or will act on their own initiative. Each game turn is divided into two - the issuing of orders and the movement and combat that is a result of those orders. If you're a fan of this peri-



od of wargaming then *Napoleon at War* is a must, and even if you're not then it's still well worth a good hard look.

OPPOSITION ■■■■■
DISPLAY ■■■■■
EASE OF USE ■■■■■
GAME DEPTH ■■■■■
ACE RATING 920

THEATRE EUROPE
PSS

Spectrum £9.95 cs
C64/128 £14.95 dk
Amstrad £9.95 cs £14.95 dk

This wargame is set just in the future and covers the first 30 days fighting between the



NATO alliance and the Warsaw Pact. Should you decide to play as supreme commander of NATO your objective is to prevent the invasion of West Germany - at all costs. Obviously, should you decide to play supreme commander of the Warsaw Pact then your objective is to occupy West Germany.

There are four basic phases to the game: movement phase, attack phase, resupply phase and the air phase. Before an attack is made the player also has the option to use tactical chemical weapons in attacks. The air phase allows the player to control a limited air force and struggle for air superiority by deciding where and when to make an attack behind enemy lines.

As is usual with PSS games, there is the opportunity for the player to enter an arcade style game, which means the player can actively participate in a battle. This is all very well and good if that's what you want, but frankly the game is just as good if you never opt to take part in one of the battles. Certainly the

arcade element should not be a prime reason for buying the game.

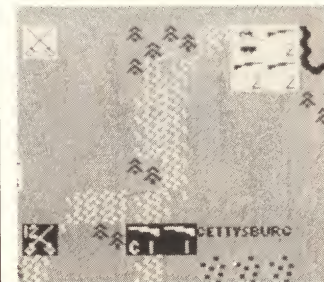
At its new knock down price, *Theatre Europe* is a gift. It comes frighteningly close to predicting the future for Europe should the unthinkable happen.

OPPOSITION ■■■■■
DISPLAY ■■■■■
EASE OF USE ■■■■■
GAME DEPTH ■■■■■
ACE RATING 915

YANKEE
CCS

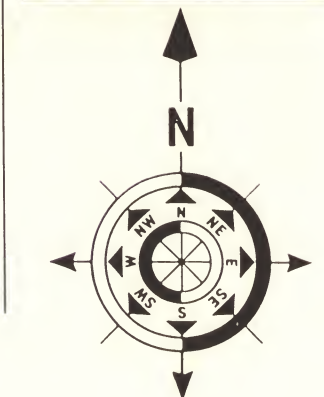
Spectrum £9.95 cs

This single player wargame set during the American Civil War of the 1860's comes with two scenarios taken from the war. The first and most famous is the battle of Gettysburg where the Union troops repelled the Confederate attack and won a decisive victory. The second scenario features the battle at Chickamauga (Georgia) where the Confederates managed to defeat the Union troops after a long and bloody battle. The sequence of play involves the player issuing orders either to



individual units or to the Corps Commanders, who can, if you desire, act on their own initiative. A very well designed screen display makes for an enjoyable game that is also a testing challenge.

OPPOSITION ■■■■■
DISPLAY ■■■■■
EASE OF USE ■■■■■
GAME DEPTH ■■■■■
ACE RATING 895

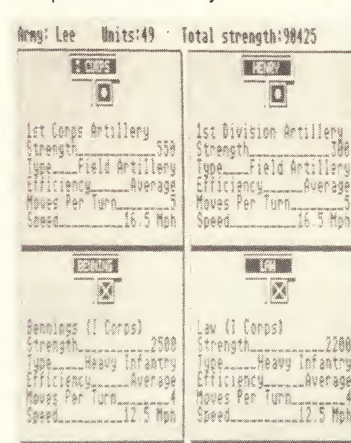


UNIVERSAL MILITARY SIMULATOR

This new offering from Rainbird looks like being a universal military success, a game that marks a giant step in war-gaming and strategy and which promises to bring this area of gameplaying to the notice of a far wider public.

Programmed by a dedicated American wargamer who spends most of his spare time wandering across the sites of historic battlefields, pondering the fate and fortunes of armies past and present, *UMS* is notable for the total control it gives the player. Not only can you re-run five classic conflicts, ranging from the battle of Arbelia in 331 BC through Marston Moor (1644) to Waterloo (1815), but you can also define your own armies, units, weapons, and even the terrain across which they face each other.

The pre-set battles each feature 3-D grid-scapes based on contemporary maps, giving an added dimension of realism to the conflicts. This sort of attention to detail is apparent throughout the program, giving you the ability to manipulate almost every conceivable element of battle. Time-scales, morale,



The Army set-up screen allows you to determine the exact specification of your fighting force.

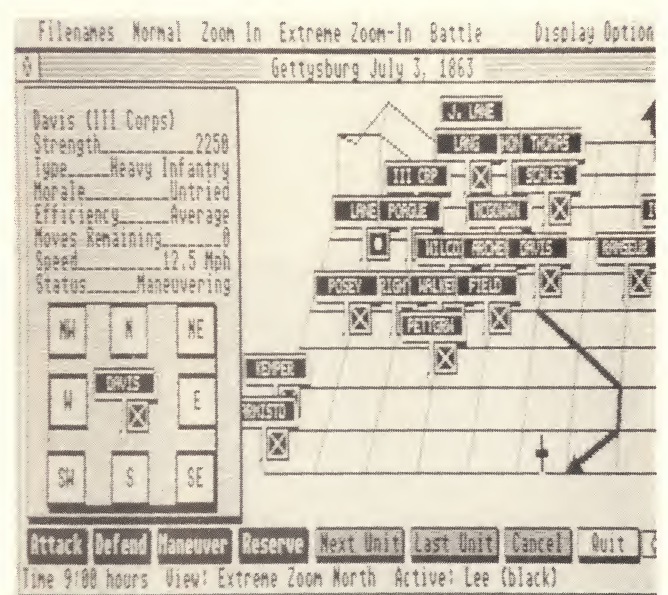
injuries, armament, numerical force, terrain, and map design all have a bearing on the outcome of the battle, and all can be altered at any time before, during, or after the confrontation by the user.

Of course you don't have to take the historic battle approach too seriously. If life with the Jones' is really becoming too much to bear, why not plot out a 3D representation of their garden and launch an all-out strike? First person to capture the opponent's dog and feed it to the lions is the winner. Or you could stage a battle on a far-off planet, or whatever else takes your fancy. Seven years in the making, the program has the flexibility necessary to make this possible.

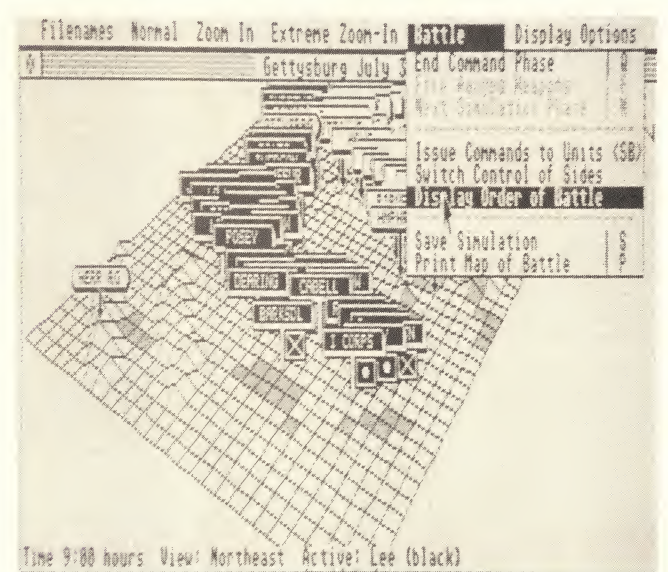
Throughout a battle the program displays sectors of the maps, showing the movement of different units and reporting on the outcome of any engagements. Naturally the pre-set battles run strictly according to history - until YOU start altering the parameters, and find out what would have happened if Napoleon hadn't had to march up that ridge, or if Wellington had been face to face with Harold at Hastings!

For the serious strategist, the ability to cancel or edit any command instruction to any unit at any time during the battle is invaluable for instant 'what-if' investigations. In this respect the program rises out of the realms of entertainment and into the realm of true education - and not only for you and me, since rumour has it that the CIA are touting for a copy for use in their training department.

The program will be released with an 80-page booklet giving details of the pre-set scenarios and a 30-page machine-specific manual. It will also be the subject of a full-scale feature in next month's ACE.



The Issuing Orders screen, where the player issues orders to an individual unit, taking into account the surrounding terrain and the opposing forces.



Display options include a multiple zooming facility, allowing you to get a close-up visual display of any area from any direction. The green areas represent woods, other features include ridges, hills, and landmarks. There's even a facility for defining a randomised map for use when you run out of ideas.

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This month the Pilg embraces Ingrid Bottomlow, challenges the polls in *Yes, Prime Minister*, and previews *Jinxter*. The White Wizard also makes a (small) contribution...

PILGRIM

GNOME RANGER

LEVEL 9 launch Ingrid Bottomlow...

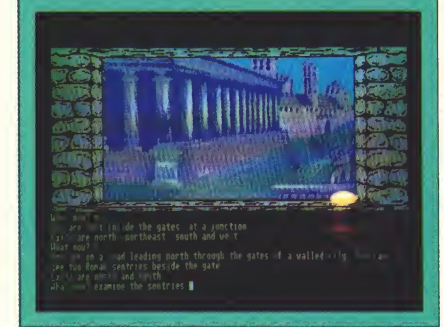
THIS is the second game to use Level 9's new 'interactive character' system - and things are definitely looking up. *Knight Orc* failed to stir the Pilg's blood to any great extent, though it was - by most companies' standards - a good enough program. There were an awful lot of unnecessary computer-controlled characters in the game and this - in conjunction with the lack of information about what was really going on - I for one found rather unsettling.

However, Level 9's new Managing Director, Ingrid Bottomlow, has obviously been throwing her weight around because *Gnome Ranger* puts right a lot of things that were wrong with *Knight Orc*, and does it with a sense of humour and some clever puzzles.

Some time ago, Pete Austin of Level 9 told the Pilgrim that the only way forward for adventures (he believed) was in the construction of multi-character puzzles. The days when you could just find a rod and wave it over a chasm were past and for there to be any real originality in an adventure the puzzles were going to have to involve other NPCs (non-player characters).

Older times...Older magik

We mentioned Level 9's new *Time and Magik* release last month. Seems like it won't be ready now for at least another few weeks. One thing we didn't mention however, is that the 16-bit versions are going to feature a lot more text than the originals. That's encouraging, because the Pilg recently played a pre-release version and was dismayed by the brevity of the descriptions. Bytes were tight in those days, fellow Pilgs, but upgraders can look forward to a textual feast with the new versions - or so I am assured by Pete Austin.



Look at most of the successful games of recent months and you'll see that there's a lot of truth in this. Characters pop up in games with greater frequency than ever, and more often than not you'll have to co-operate with them, or recruit them in some way to gain your objectives.

Knight Orc implemented this policy with a vengeance, and one of the game's problems was that it went too far. Some of the puzzles require several characters to solve, and some of them are VERY difficult indeed. Enter *Gnome Ranger*...

The plot of the game is really pretty basic. Young Ms Bottomlow starts the game a long way from home, having been whisked away from her family by a 'fauly' teleport scroll. There is just the faintest suggestion that the affair was a deliberate ploy on behalf of her family to get rid of her, but we'll let that pass and it doesn't seem to have any bearing on the gameplay!

The game is in three parts and unlike *Knight Orc* you can't move between the parts at will - each part is a separate game unto itself and you have to solve them in order, gaining access to the next episode only when you have completed the current one.

In the first part you find yourself outside a shop, surrounded by a grassy plain. One of the Pilg's criticisms of *Knight Orc* was that there were a lot of locations which served no useful purpose. OK, so you can GO TO in Level 9's new system, but why bother to include a location if you're just going to pass through it on your way to somewhere else? No problems like that in *Gnome Ranger*, there aren't that many locations in each section and you can easily move about them at the start, getting your bearings before using the GO TO command later.

In partnership

All the puzzles in the first part of the game involve other characters. You can make very little headway without, at the very least, recruiting the **gnymph**, and you will also encounter a rather charming **swarm of dogs**, who reminded the Pilg of the latest

Winalot advert. And then there's the **llama** (who doesn't seem particularly important), the **eagle** (who is), the **unicorn**, the **centaur**, and so on. Each of these characters has certain attributes that will enable you to succeed in your initial quest, which is to destroy the power of a wicked witch who has developed a world-wide commercial empire based on stone gnomes.

RELEASE BOX

All versions should be available by the time you read this. A word of warning to graphics fans, however - 8-bit cassette versions will be text-only. This doesn't worry the Pilg unduly - I'll still be playing my Spectrum version, pics or no pics.

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If you succeed in breaking the witch's wand and shattering her power, you're through to the second part of the game. Whereas the first part centres exclusively around character puzzles and co-operation, the second part involves manipulating the ingredients for a series of magical potions. For Ingrid to continue on her journey home, she must first resurrect the Alchemist's tea plant, which for some reason shrivels up at the beginning of the game when Ingrid innocently picks a leaf from it to brew a pot of char for the old gent. The answer, of course, is a fertilising potion, but the ingredients (or one of them, at least) are extremely difficult to come by.

The potion system in part two deserves a mention. Each mixture requires four ingredients, and each ingredient is classified by nature, colour, smell/taste, and texture. Thus if you have a leaf, a yellow berry, a sweet fruit, and a hairy berry you could brew up



The Witch's cottage in *Gnome Ranger*. A desirable residence, complete with a unique collection of stone gnomes, dog kennel, and sitting tenant.

A shot from *Jinxter*. No compromise here, just sheer pixel perfection. Only lucky tenants should apply.

Jinxter again. Frankly, if the game's as good as these screen-shots then we all might as well order it now...

the same potion as you could with a leaf, a yellow fruit, a sweet berry, and a hairy caterpillar. The recipes for different potions are not difficult to find, though some are rather cryptically expressed.

Once you've resurrected the tea-plant, you're on your way to part three and the final stretch. At this stage you will find yourself sorting out peoples problems in a world dominated by mineral themes, thus completing the 'animal, vegetable, mineral' sequence. Penguins, yetis, and war between the fire people and the ice people will be your chief concerns before finally arriving home.

Gnome Ranger has improved on *Knight Orc* in the puzzle stakes (more logical and enjoyable), the atmosphere (more enjoyable and less confusing), the plot (more comprehensible), and the characters (more interesting). You can't ask for much more than that, except that perhaps Level 9's next game could give us more of the same. It would be good to see a slightly bigger game, in terms of locations and puzzles, but for the time being this will do nicely.

SYSTEM ■■■■■
High level commands include FIND and FOLLOW

CHARACTERS ■■■■■
Better implemented than *Knight Orc*

CHALLENGE ■■■■■
Many logical puzzles involving other characters

LANDSCAPE ■■■■■
Easy to explore but not that many outstanding locations

An improvement on *Knight Orc* that promises well for the future

VERDICT 915

YES PRIME MINISTER

MOSAIC give you the keys to Number 10

THOSE of you aged over 50 or so will probably remember the days of Eton collars, the war, Clement Attlee, and the day when Mosaic first announced that they would be launching this game. OK, so the Pilg exaggerates a teensy bit, but let's face it, this game has been a very long time in the making. Now it's waiting on the shelves for you, clamouring for your vote and your money...does it deserve either?

No, unfortunately it doesn't. In fact, this game, based on the humorous TV show of the same name, goes down in the Pilg's book as one of the biggest missed opportunities of the year. Let's see what went wrong...

RELEASE BOX

C64/128	£14.95cs, £19.95dk
SPEC	£14.95cs
IBM PC	£24.95dk
AMS	£14.95cs £19.95dk

First, the game uses the same basic principle of the Adrian Mole games from Level 9/Mosaic. This means that rather than move about from location to location the program tells you a story, so to speak, and pauses at opportune moments for you to select from a

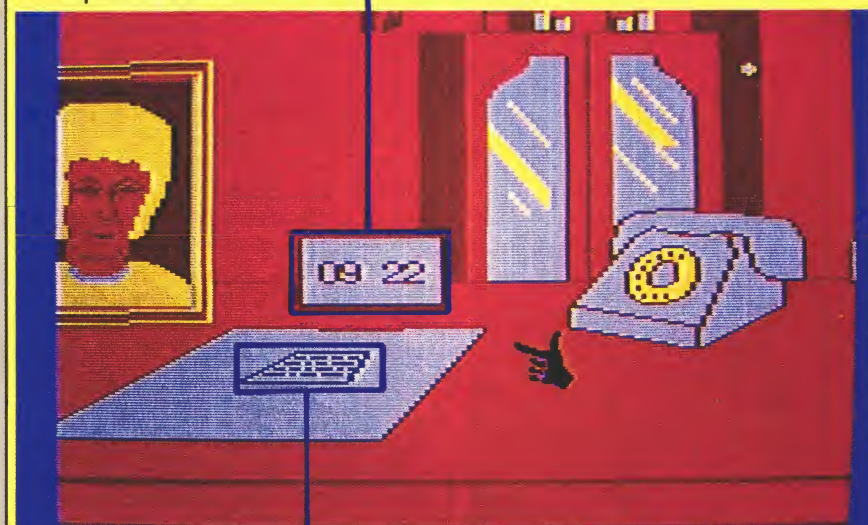
number of possible alternatives. Depending on your choice, the plot then proceeds in various different directions and new situations develop.

The storyline of *Yes, Prime Minister* takes

Somehow the time always manages to slip past your next appointment while you're looking at another part of the screen.

place in five parts, each part being a day in a working week of Britain's Number One. The display shows you the interior of your office, complete with two phones, two drawers, an 'ideas box', a telex machine, a clock, an

Scroll this-a-way for the suggestions box and the poll ratings.



Blotter...complete with a short memo from dearest Bernard.

Scroll this-a-way to find the teletype and the intercom, but while you're over there remember that time is still ticking by on the clock.

intercom, and a blotter.

Gameplay is as follows. You have a symbol (it varies from machine to machine, but is basically a pointer of some kind) which you can move about the screen using the cursor keys or a joystick. As you move it, new areas of your office scroll into view (on the Commodore and Amstrad versions, the screen flips on the Spectrum). By 'clicking' on an object, you select it and may, occasionally, be able to interact with it...

For example, you start the game on Monday and scroll the screen to show your clock, which says 9.00am. The minutes tick by pretty rapidly, so you should find out what your appointments are for the day. This is done by clicking on the left hand drawer of your desk, which causes a diary for the day in question to be displayed. The most you'll have in a day is three appointments - sometimes there will be none. Your appointments schedule does not change from game to game, though what happens in between meetings does.

SYSTEM ■■■■■
Easy to use with novel graphics interface, but still very limited

CHARACTERS ■■■■■
Excellent text maintains essence of TV personalities

CHALLENGE ■■■■■
Enjoyable trial and error, but not much else

LANDSCAPE ■■■■■
Repetitive scenario limits scope of the game

MCS games need 20M bytes and 16-bits to win votes

VERDICT 595

While you're doing this, you may have heard a plaintive beeping. Scroll the screen around your desk and you will notice the phone flashing. Click on it, and the screen changes to text mode, with the caller's message displayed. There's nothing for you to do except read what he has to say, then read what you say in response, and occasionally select one of several speech options at critical moments.

Whether it's the intercom beeping, or the other phone, the procedure is identical. To liven things up a bit, a memo will occasionally appear on your desk, which you can read by clicking on it, and which will probably contain some droll message from Bernard Woolley, your private secretary. You can also read incoming messages on the teletype (usually giving notice of some foreign disaster) and some rather uninteresting political platitudes that spring from the 'ideas box'.

As the clock flicks through the day, you will find yourself attending meetings in nearby offices. To get to these you click on your door and then choose the appropriate destination from the list presented. You never actually see another location, but simply read on-screen an account of what happens there. That account, as with almost all 'events' within the game, will be composed almost entirely of dialogue between yourself, Bernard, and Sir Humphrey Appleby, the Cabinet Secretary.

Political aims

Your objective in the game is to stay in power and boost your rating in the polls, which you can check by clicking on the Union Jack in your office, to reveal a safe behind it. Clicking on the safe gives you an up-to-date poll report - you start the game with 50% and must obviously attempt to improve on that figure as the days roll by.

The manner in which you achieve that objective lies in the way you select the various options during the games. For example, suppose you have a meeting at 9.30am with Sir Humphrey. Providing you aren't busy answering the 'phone or reading a memo at the time indicated, you will be able to click on the door, select Sir Humphrey's office, and enter into dialogue with the nit-picking old busy-body.

Sir Humphrey, for example, may wish to discuss with you your plans for setting up a Ministry for Women. Do you not think, Prime Minister, he might say, 'that this will offend: (a) your loyal male supporters (b) your loyal female supporters'. The program then waits for you to click on one of these choices, which is somewhat strange since it's Sir Humphrey speaking and not you. Even more strange, if you make him say something inappropriate (such as (b) above), he will start getting crotchety! You then reply to him, and have a similar opportunity to direct

the flow of your own side of the conversation among the somewhat limited alternatives.

Despite the slight illogicality of being able to direct all sides of an argument, this actually adds a little to the gameplay and makes things more interesting. In fact, the text of the dialogues is really very witty in parts and every bit as good as the TV series. So what went wrong?

The biggest problem lies in the repetitive nature of the game-play. There is a basic storyline which does not alter from game to game, and on top of this various 'random scenarios' will occur. Each meeting you attend can lead you, depending on which options you choose, into different sequences. The trouble arises when you have played the game about five times (and it doesn't take long to finish, either). Despite the fact that new scenarios occasionally crop up, the variety steadily grows stale, and the bulk of the game becomes depressingly familiar. What you end up with is an initially enjoyable game, that turns out to be a disappointment. Mosaic reckon you'll want to return to it in much the same way as you would return to a book you've already read. The Pilg is not convinced, and I suspect that this sort of game needs a massive text-database, a 20meg hard disc, and more intelligence to succeed.

Variety show

The White Wizard ponders on multiple choice games...

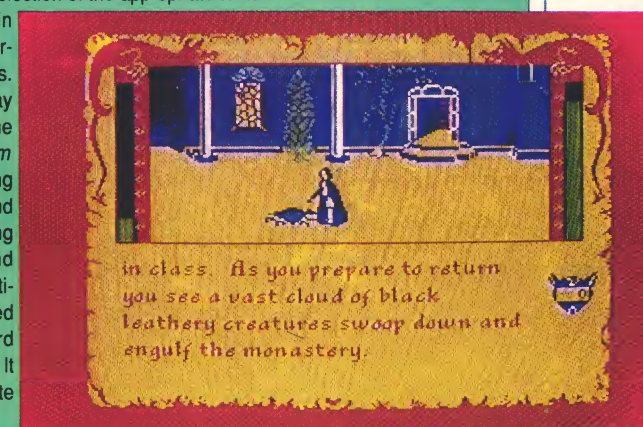
I humbly beg to submit that the Pilg has missed the point with *Yes Prime Minister*. I would argue that a pure Multiple-Choice Scenario can never be a good game! Here is my case...

Mathematics. For an MCS to work well, it needs enough plot variations to be able to give the player the impression that his decisions are radically affecting the game storyline. What does this imply? Imagine you have three choices at each 'junction'. You start the game, and make your first choice. The computer needs to store three different scenarios - one for each choice, and you find yourself in one of these. But each of these secondary scenarios requires three further scenarios, and so on...Addicts of programming tree structures will love this, but for the rest of us I can simply state that after making ten decisions in the game, you would have to be in one of nearly sixty thousand possible alternative story-lines. Memory chips ain't that cheap, my wizardlings.

So you do one of two things...You compromise, and keep steering the reader back to the main storyline. This was the approach in the Level 9/Mosaic Adrian Mole games. Level 9 realised that to make this sort of game work, you need to provide lots of text and as many different routes for the storyline to follow as possible. The Austins managed to achieve their aims, to a certain extent, by using highly efficient text-compression routines and keeping the rest of the program as simple as possible. Thus the display presented nothing but a rudimentary graphic at the top of the screen, leaving all the processing power for the retrieval and selection of the appropriate texts.

Alternatively you compromise in another way, abandon the pure MCS format and add more command features. Wizards with very long beards may remember the game from which the screenshot below is taken - *Flight from the Dark*, based on the role-playing books by Joe Dever and Gary Chalk, and in turn derivative of the original Fighting Fantasy books of Jackson and Livingston. This game not only had multiple choice options, but also a limited command structure using a keyboard overlay rather like *Lords of Midnight*. It did not get very far in the charts, despite a pretty face.

Neither of these compromises appeals to the Wiz overmuch, but he reckons that the second is by far the most promising. *Yes Prime Minister* has tried a bit of both, but hasn't really succeeded on either count. But then given the MCS format, I'm not surprised. Can anyone prove me wrong?



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IRON HORSE



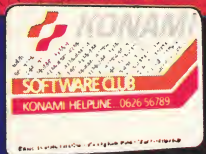
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Pilg Preview

Jinxter

Magnetic Scrolls

First, *The Pawn*, great graphics, shame about the game, but still a highly significant release for British adventurers; second, *Guild of Thieves*, great pics, good game; third, *Jinxter*, stunning pics, and – by the look of a pre-release version – an excellent peregrination throughout the slightly eccentric world of Magnetic Scrollers.

Life is tough behind these pixel-perfect portrayals of Aquitanian tourist spots. The

All the fun of the fair...

Is it the Pilgrim's imagination, or have Magnetic Scrolls adopted a slightly OTT approach to the locations in this game? OTT meaning, of course, Outrageous Textual Titillation. Here's what the VDU has to say when you start exploring the fairground in *Jinxter*:

>On the Carousel

How vividly painted this carousel is, with its golden domed roof and pink and white curling pillars. The traveller will most certainly enjoy a ride on one of the splendid animals bridled and waiting, be it the rearing unicorn, the fiery dragon or the stately pelican. Or should he shy away from these painted monsters? Perhaps a crimson fire engine or a replica of the Aquitanian State carriage drawn by six blue-bearded walruses would be more appropriate? In the middle stands a large jukebox waiting to blare out majestic band music to accompany you on your journey. Should you not feel drawn by all this splendour then be on your way! Northeast will take you back into the dreary fair-ground whilst southwest takes you towards a clockmakers shop.

land is threatened by the powers of evil, notably a witch by the name of Jannedor, and to restore law and order you must locate a number of lucky charms and reassemble the Bracelet of Turani.

Jinxter is a slightly smaller game than *Guild*, with about 90 locations, but Mag Scrolls are emphatic that the reduction in the size of the map was a deliberate attempt to pack more into each 'room'. Certainly the Pilg found that there were puzzles galore during his brief excursion into the game, and some were every bit as witty and inventive as the mynah bird in *Guild*. You'll experience problems with intoxication, operating theatres, train-roof rides and tunnels, killer buses, and bulls, to mention but a few. There's even a chance to earn a living as a musician, or to go scuba diving. Certainly enough to keep you going...

There is one particularly interesting aspect of this game. The company have tried to address the 'puzzle progress problem'. Put briefly, this problem is as follows: you need to put puzzles in a game that are sufficient to give the adventure lasting interest – present a real challenge; at the same time, however, you must also allow the player sufficient freedom to explore the game in the early stages, otherwise his/her interest may slacken off. How can you compromise between these two requirements?

Magnetic Scrolls have done it by introducing a figure called The Guardian. His pot-bellied appearance, complete with out-of-fashion herringbone overcoat, slightly belies this grand title, but then we've come to expect that sort of thing with Magnetic Scrolls, haven't we? His function is, quite simply, to enable the nervous player to bypass the puzzles his limited experience cannot solve.

For example, there you are in a field, when suddenly a large bull decides to butt you into the life hereafter. Instead of having to start again, The Guardian assists in your resurrection and you can continue from where you left off. The nitty-gritty, however, is that by-passing puzzles in this way doesn't earn you any points, so there is still a lot of incentive to take them by the horns and earn your spurs the proper way.

Jinxter has some great text, in part written by Georgina Sinclair, sister of the infamous Anita Sinclair from Mag Scrolls, with additions from other quarters. There's no doubt that the programmers and designers at the company have put a lot into the adventure, and the Pilg looks forward to giving it the usual in-depth treatment next month. It could well be their most popular release yet.

Pat's Patch

Pat Winstanley's regular column for *QUILLing*, *GACing*, and *PAWing* adventurers. This month Pat looks at providing automatic exit printing...

Both GAC and PAW provide the facility for checking the connection table and finding out where the player can move to in a particular direction. Using these we can set up a system whereby each available exit will be printed after the room description each time the player 'looks' or revisits a room.

The system won't work for 'conditional' exits, but these can be handled by an extra message as long as you don't have too many of them. But if the vast majority of your exits are conditional you may as well forget these routines, as the result will be very messy.

This month we'll see how to implement the routine on GAC, as the method is fairly straightforward and easy to follow. PAW users will get their turn in the next issue.

Enter in High Priority

1. IF (SET? 0) MESS 'visible exits' END
2. IF (CONN 1 > 0 AND SET? 0) MESS 'north' END
3. IF (CONN 2 > 0 AND SET? 0) MESS 'south' END
4. IF (CONN 3 > 0 AND SET? 0) MESS 'east' END
5. IF (CONN 4 > 0 AND SET? 0) MESS 'west' END
6. IF ((CONN 1 + CONN 2 + CONN 3 + CONN 4) = 0 AND SET? 0) MESS 'none'
7. IF (SET? 0) RESE 0 END

GAC notes

Line 1. We only want the routine to work when a room description is printed, not every turn the player remains in the room, so SET? 0 is used to check this, and line 7 resets the marker until this or another room is described again.

Lines 2 to 5. Again we check marker 0, and for each possible direction, the connection table is checked for the current room. Thus CONN 3 finds out which room is east of the current room. If a connection exists, the number of that room will be returned. If no connection exists the result will be 0. Each of these conditions will succeed if a connection is found (i.e. CONN x > 0), the relevant message will be displayed, then the next condition will be considered. If the condition fails (i.e. CONN x = 0) no message will be printed.

Line 6. This covers the situation where there are no exits at all!

Graphics cause problems with long text descriptions, so if you find the text scrolling off, here's an alternative to automatic printing...! Simply set the above conditions as low priority, with a command such as EXITS to be typed by the player. You'll also need another marker, set when EXITS is typed, checked in each line of the routine, and reset on the last line. Otherwise you'll get the exits printing every time the Low Priority table is accessed.

Pat's address, if you wish to write in with a query or any other matter concerning adventure writing, is Pat's Patch, c/o Advanced Computer Entertainment, 4 Queen St, BATH, BA1 1EJ.

POSTAL ORDERS

Fancy discovering the North Pole? Or winning World War III? Challenges like these are persuading more and more people to sample the delights of Play-By-Mail games, or PBMs. ANDY SMITH checks out what's on offer...

Interest in PBMs has grown dramatically in the past few years. From the two-player skirmishes of postal chess to games specifically designed to involve several hundred players simultaneously in the conquest of a fantasy universe, the PBM bandwagon has grown and grown.

Nowadays the basic PBM format involves a 'base' where the umpire or Game Moderator - GM - processes the game, and it is to this address that the players send in their orders (usually called 'turns').

In most modern games, the scenarios are extremely complex and the 'turn' forms you fill in give you dozens of options for controlling your forces, manipulating your resources, and allying with other players. Each game has its own objectives. For example in *Starglobe* your objective is to become the Lord of Monde - which means, incidentally, that you get to play for free until you're deposed as well as enjoying other game privileges; in *Earthwood* the objective is to capture the other players' cities, either through alliances, corruption, or downright aggression.

Most of these games have scenarios so complex (although remaining easy to play) that it is no longer possible for them to be processed by hand. The computer-moderated game has become the norm, which makes life easier for the GMs and has also enabled games to develop in size and depth.

Over the next few months, ACE will be reviewing, commenting on, and evaluating PBMs of many different shapes, sizes, and scenarios. Furthermore, many of these games will be available with special offers to ACE readers, enabling you to save money while you play.

This month we're joining with KJC games, who have just launched *Earthwood* - *The Sea Kings*, a 25 player game of exploration and conquest. The player takes the role of an Island King and attempts to conquer all the other islands on the map (once they are all owned by either a player or a player alliance then the game is won). If you would like to take part you can use the coupon below to order the registration documents, the rulebook and FIVE free turns (subsequent turns cost £1.50) for only £5.00

instead of the usual £8.00. It is a deadlined game (see box), which means you'll have to return your orders before a specific date (you'll be told on your sheet exactly when)...

Everything you ever wanted to know about PBM's but didn't have the stamp to ask...

1. What do I need to play PBM's?

A pen, plus of course some money to pay for the turns. A 'phone can help but is not essential. Cunning, a vivid imagination and some spare time are essential, however.

2. How much does it cost?

Depends entirely upon which game you play - charges vary from as little as 25p per turn to over £5 per turn. Average turn price is between £1 and £2. But beware - although some PBMs have a fixed turn cost, extra charges may be made if you wish to do something in the game that requires extra work on the part of the GM.

3. What can I actually do in the game?

Almost anything you wish - you are often only limited by your imagination. The turn sheets can have you writing detailed descriptions of how you intend to rob a bank, or wandering through the crypt of some vast alien cathedral. Or again you could be juggling statistics in an attempt to deploy your forces against an incoming nuclear attack.

4. How long do PBM's last?

Some games have a set number of turns and at the end of those turns a winner is decided upon and announced. Other games can continue indefinitely (or as long as people are still paying to play them). Average game time is between six months to two years.

5. Who wins PBM's?

Some games have no winners as such, while others have definite winners who have managed to satisfy various conditions. Winning conditions are always made clear to the player before the start.

6. What if I join a game but soon find I don't like it?

Simple - don't play it any more. Write to the GM, politely saying you no longer wish to play - for whatever reason - and request that any remaining credit be returned to you. Most PBMs are able to cope with the inevitable 'drop outs' that occur during a game. However it can ruin some scenarios and so the GM's request you to read their rule books thoroughly before asking to join a game.

7. Can I contact other players in the game?

Sometimes. Game Moderators will keep your name and address confidential and will not pass it on to other players. Most games, however, have an internal posting system which allows one player to contact another through the GM. If you contact another player outside the game (which is sometimes frowned upon) then passing on any copyrighted material is a criminal offence, so beware.

8. How frequent are the game turns?

Some games have a 'fixed deadline'. That is, all the turns are posted to the players at around the same time and the player has to return the completed form(s) before a stated date. These deadlines vary from game to game, and can be anything from a fortnight to a month per turn. Some deadlined games will run the same game but with different deadlines, in which case you will be asked if you wish to play with a two week, three week or four week deadline. Whichever you choose, you can rest assured that the other players are governed by the same deadline. A different class of games (called 'open ended' games) allow you to submit turns as often or as infrequently as you like.

9. What if I miss the start of a game?

Most companies have plenty of room in existing games and new scenarios are being launched all the time. The majority of companies will run the same game for many different players, so if you decide to join a game that only allows 15 players and all places are filled then another game is created.

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TRICKS 'N' TACTICS

RED L.E.D.

Hints for that slippery game – straight from the horse's mouth

Check out ACE's red-hot tips on this month's toughest assignments. Cheat modes, tactical advice, strategic directives – everything you need to make this your highest scoring month yet on games like *Dizzy*, *Road Runner*, *Boulderdash*, *Skulldiggery*, and many more.

Success in this game depends on knowing the properties of the three droids and on knowing some intimate detail about the maps. Who better to reveal the inside knowledge than 'Tag' – Anthony Taglioni – one of those responsible for the design and programming of this 900+ rated masterpiece?

The Maps
Learn the maps. Each of the hexagons will always go to the same landscape and on level one there are fourteen time-plus capsules. Ever needed an extra 70 minutes? You'll find a couple of handy ones in the hexagon just below centre. Just make sure you can tell the difference between the positive and negative ones. It's a good idea to have a route across the hexagon grid which takes you through as many landscapes as possible with time-plus capsules in and you can always just dive in and grab the others. Don't be afraid of aborting a level if it doesn't harm your route. It can be worth going in just to get some time or to get some energy for a weak droid on a level you know a safe spot in where you can sit and defend yourself. Always try to enter the next grid level with all the time you can get your hands on.

next to the exit for a massive 28,000 points and seven very handy minutes. Decide on your favourites and save them for that S.

The Smart Bomb
The smart bomb really comes into its own on grids from 2 onwards. After level one the enemy droids really go for you after you collect your last energy pod. Try to make the last one you collect the one nearest the exit (and remember that having a smart bomb on board can make all the difference as you dash for that exit). Always leave the last pod until after you have collected anything else you want to collect on the level. A good trick on a few landscapes is to shoot all generators you meet and then carry a smart bomb to the exit where there is both another generator and your last pod. Fire the smart bomb and you're all alone and safe as houses.



The Bonus
The bonus is a critical part of playing Red L.E.D. Sometimes even that extra 70 minutes is not enough. An extra bonus letter is awarded every 10,000 points, provided you picked up the last one. Only one is given for each hexagon. Learn where the bonus letter appears so you can take it as soon as it's there and get out for the next one. Always try to collect the 8 on the top and bottom blue hexagon as the bonus phase starts you

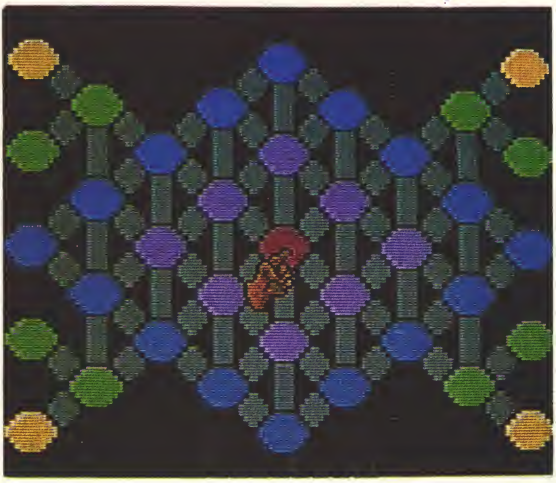
The Droids
FANG sticks to slopes. He's very useful for the centre (red) hexagon and also for the top-right and bottom-left green hexagons, but is uncontrollable on acid lakes – even when they are ice. Take him in to an acid world at your peril!



HOVER floats over the surface and so is immune to acid. Not so manoeuvrable as FANG or BALL but is a lot safer until you learn where the ice switches are. Very useful for bottom right and top left green hexagons and many others. A very handy droid.



BALL doesn't have the abilities of either FANG or HOVER but can manoeuvre anywhere if the acid doesn't kill him. Also he doesn't take as much damage from the nasties trying to end your game as the other two droids. A good choice for most of the 'dry' landscapes and usually safe anywhere else once you find the ice switches.



Freeze devices
Droid freeze devices are a handy breather at any time but, like smart bombs, can be a real droid-saver on higher grids if you can leave them until just before collecting the last pod. Again, learn where they are.

Learn those maps!
I'll say it again – make sure you learn the maps. A lot of landscapes have short cuts over the edge of cliffs which can make the difference between a good bonus and a poor bonus and between life and death as your last ice freeze is running out. The teleport network can also save an awful lot of running around but isn't always the quickest route – a pod that is three or four teleports away may be just over the edge of that cliff you're standing next to.

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ROAD RUNNER

How to gain an invaluable extra life on the ST version of the cartoon capers

First get to level 2 and lose any remaining lives. Then when you restart the game you'll notice the short cut is open. Don't take the shortcut, but let the Coyote catch you. Now every time you take the short cut you'll be awarded an extra life and you'll restart from the beginning.
T. CARTER, Birmingham



DIZZY

Playing tips on Code Masters' cute Spectrum arcade adventure.

Grease gun – oils the cart and can be found in the room to the left of the first. Drop it next to the cart in the mine shaft.
Graveyard key – opens the graveyard door which is situated at the far right from the start. Can be found in the mine shaft.
Plastic raincoat – stops the rain droplets from getting to you. Can be found in the Haunted Chimney.
Ghost buster gun – fall onto the ghost in the Haunted Chimney with this and you'll destroy him. Found in the diamond mine.
Miners' hard hat – protects you from falling apples and stalactites. Found in the room to the right of the Haunted Chimney.
Purse of gold – drop this onto the bucket next to the hermit's house and you can then enter. Found in the room that is to the right and down of the Haunted Chimney.



BARBARIAN

(Psygnosis)

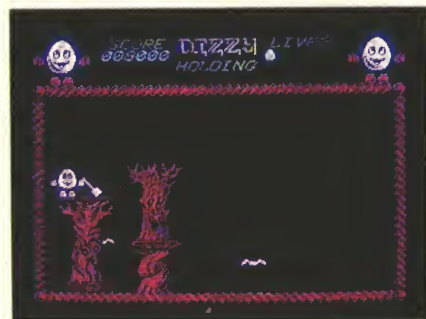
Amiga and ST cheat modes for indestructibility

First, load the game. Then on the main keyboard, press 0 then 3 then the minus sign (the left one on the ST) then press 0 again, then press 8 and the minus sign again (left on the ST). Now finally press 5 then 9 and no matter what happens, the game just won't die.
M. GEORGIADIS, London



3 in 1 oil – drop this on the winch next to the drawbridge and it will open. It's found in the secret caves.
Bird seed – kills the white birds. Found in the mine shaft.
Crow bar – opens the trapdoor which is under the spider at the bottom of the cliffs.
Emerald – found on top of the Crystal cliffs, it should be put in the eye of the one-eyed statue in the graveyard.
Clove of Garlic – kills all the red bats and is found under the trap door (that you used the crow bar to open).
Flaming Torch – drop this next to the cauldron at the start of the game and the fire underneath it will be lit. Found in the room to the right of the start.
Spade – found at the top of the tall tree, it should be dropped in the middle of the room with the hollow-sounding ground.
Mushroom Trowel – found in the hole the spade made, you should drop it on the mushroom that's on the left of the hole.
Bolt Cutters – cut the rusty chain which is holding the raft.

Dry ice – found on the Crystal Cliffs, it freezes the waterfall in the Mushroom Cave.
Protective Amulet – protects you from Zak's spells and is found past the frozen lake.
Insecticide – found in the graveyard, it kills the spiders.
Duck Feathers – found next to the drawbridge, they should be dropped in the cauldron.
Troll brew – found in Zak's castle. Drop it in the cauldron.
Broken heart – also found in the castle. It should be given to the broken-hearted woman in the Graveyard.
Wig – drop in the cauldron.
Clouds Silver Lining – drop it in the cauldron.
Empty bottle – found in the screen with the



Haunted Forset message, it should also be dropped in the pot.
The Full Bottle is what you end up with having dropped the Wig, Silver line, Feather and Brew into the pot, and this should be dropped next to Zak in his castle.

AL and RIC, Pirton

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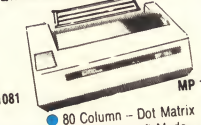
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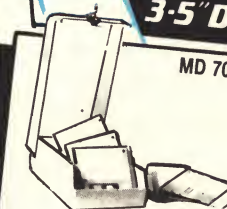


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The rocky, jewel-encrusted classic is back on the shelves – on the cheap. At a mere £2.99 you'd have to be stark, staring bonkers not to get hold of a copy. For those already hooked – and those about to be hooked – we present this playing guide. But we're not going to make it too easy for you – we're only giving you the first 6 caves this month.

Here you go – but remember that you may have to alter your tactics as you move up through the game's five levels. Check out the tactics box for details of different game-play techniques.

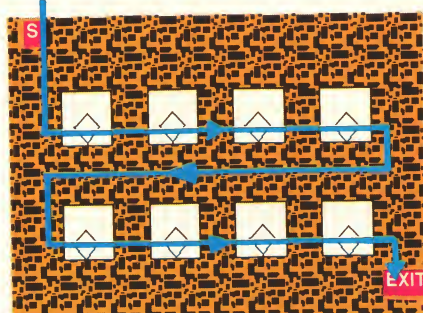
A.INTRO Once you're used to the gameplay it doesn't pose serious problems on any level. But you should make it a matter of pride to collect every jewel.

B.ROOMS Again, easy on the lower levels. On 4 and 5 there are a lot of fireflies around. You must deal with them by blocking, blasting, bamboozling or just dodging. At least the cave is near enough to the start for it to be easy to practise on.

C.MAZE Time limit can be a problem on this one. You need to work out an efficient route to take you from the start at top left to the exit at bottom right, collecting every single jewel on the way. On most levels the best way is to start by moving down to the bottom of the cave, then right, then up again through the middle of the cave, then right, then back down. Look out for boulders toppling off walls.

D.BUTTERFLIES This one's fairly easy. Position yourself within one square of the first butterfly den, and on the same vertical line as a boulder. Choosing your moment carefully, button free the piece of earth separating you from the butterfly and then immediately move up to the boulder and out of the way, so that it falls on the pursuing butterfly. Collect the jewels and repeat for the other three dens. Remember, your start point can either be immediately above the den, or a full square away on either side.

E.GUARDS Lots of different ways of doing this one. This is the quickest and classiest, albeit slightly risky. Wait to the left of the first den. When the firefly just reaches the top left corner, move right straight through the



Cave E

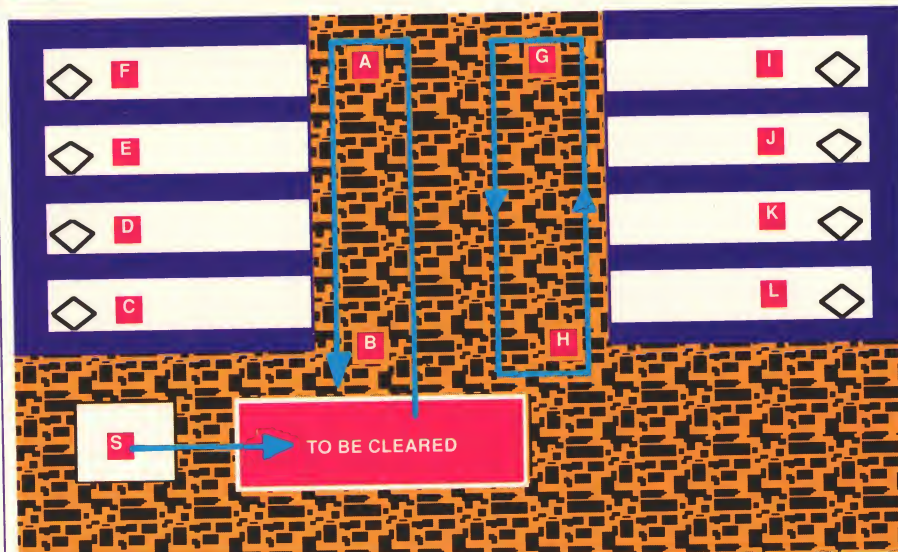
den collecting the jewels. DON'T STOP! just keep moving through the next three dens. If your timing is right, you'll go straight through unharmed. What's more the last firefly is left bamboozled and actually blocks the others

from chasing you. This means you can take your time and do the same thing on the bottom row, as is required on the higher levels. If you prefer a safer method do the same thing, but starting from the right of each row of dens. You move left through the bottom of the den while the firefly is moving right along the top of the den.

F.FIREFLY DENS On the lower levels it's possible to do this cave by blasting each firefly in turn. But there is a more elegant method. Basically you create a clear circular path (clearing a space at the bottom to start with

may help) which is completed by releasing all four fireflies at once, in a dash from A to B. As they make their way off round the circle double back and follow them, collecting the jewels, make your way to G. with a boulder. Then create another loop, making sure you block your path with a boulder. Then create another loop, making your way to H before dashing up to G and then coming back down to collect the jewels and go to the exit. The main thing to ensure is that the loops you create are not blocked by boulders, or the fireflies will double back and cause you problems.

BOULDERDASH



Cave F

Block-busting tactics...

Before you can get anywhere you'll need to become very familiar with the way the different game elements behave: the fact that fireflies always turn left at junctions, while butterflies turn right, the fact that boulders will topple off other boulders, jewels or walls, but not off a piece of earth. You should develop to a fine art the following techniques.

BLASTING: The thoroughly enjoyable action of blowing up a firefly or butterfly, normally by letting it chase you upward through Earth until you reach a boulder, when you move left or right allowing it fall on the pursuing enemy.

BAMBOOZLING: Another satisfying way of dealing with fireflies. Create a rectangular path in the Earth moving in an anti-clockwise direction, as the firefly chases you, then make your escape. It'll be left running in circles.

BLISTERING: The somewhat dangerous art of deliberately moving down past a pile of boulders, causing them to topple after you, but making sure you move out of the way right or left before they hit you. Normally to clear earth next to a pile of boulders it's safer to start at the bottom and move up, but there are many times, especially on the higher levels when Blistering is an essential technique both in time-saving and in reaching otherwise inaccessible jewels.

BUTTONING: The use of the fire-button to "affect" a neighbouring square without actually entering it. There are numerous occasions when this will make your life much safer. As well as collecting jewels this way, you can also use it to dig earth or push boulders. In addition, all the great Boulder Dash players use this technique to go through the caves' flashing exits. This has no playing value but is definitely the classy way to do it.

BLOCKING: Another important way of staying alive when being chased by enemies – move horizontally under a boulder, allowing it to fall and block the path behind you.

Skulldiggery

Check out the following tips for selected screens up to 23, plus some useful cheats for boosting your score...

2) Labyrinth. Work through systematically and don't waste time back-tracking.

3) Sultan's Maze. The creeping vine is introduced for the first time on this



screen. Collect all of the diamonds, then suffocate the vine by positioning the player so that there is no more room for it to grow. The vine will not harm you.

4) Blast in. Dig up from the top of the brick box towards the skull, so that it falls and settles on top of the wall. Next, eat the extra life cup cake at the top of the screen – doing this will guarantee you another attempt at the screen should you fail. Carry on to the bottom of the screen, release the bat and run quickly towards the brick box. Run up the right hand side of the box dislodging the skull which will fall on top of the following bat, thus blasting a hole in the wall which surrounds the healthy crop of diamonds.

6) Jumble. Set up the skulls into piles above the sections of brick wall, then drop each pile through quickly one after the other. Don't forget to dig some space underneath each wall so that the diamonds have somewhere to settle.

8) Basement. To access the lower left hand room, dig earth and push skulls to leave a clear area near the entrance.

9) The Legacy. Eat the cup cake first (in the top right hand region of the cave), then clear a path from the bottom of the screen up to where the vine is growing – but do not suffocate it too early. When the vine starts to leave its box, release the ghost at the bottom of the screen, so that he runs into the vine and explodes, freezing the enclosed ghost which will also contact the vine and explode. Completing this screen relies upon making good use of

the vine in the early stages.

11) Down in One. Eat the cup cake at the top of the screen, then dig along the next tunnel down towards the right hand side of the screen. Collect the diamond above you, then run straight down to the bottom of the screen without stopping.

12) Lucky Drop. Roll the skulls down step by step until they sit on the bottom brick

Cheats

Extra lives...

As the player goes through the escape door, press and hold the LEFT SHIFT, CONTROL, and ALTERNATE keys until the door has stopped creaking. This will give the player 1 extra life.

Extra points...

On the high score table, press and hold for a few seconds the SHIFT and LEFT SQUARE BRACKET keys. This will cause each square of earth dug to yield 1 point. This is useful if you are trying to reach a high maximum score, and also helps you to reach your 5000 point extra life bonuses earlier

High scores, higher levels

The high score table can be saved by pressing CONTROL-S, and re-loaded by pressing CONTROL-L.

It is possible to jump directly to some of the later screens by pressing '?' from the high score table. This starts the game at a random screen between about 10 and 40.

square, wait for the ghost to come along and move out of the way so that the skulls fall on top of him. Don't drop them too early, because if the ghost sees the skulls falling, he will jump over them.

13) Tubes. Stand to the side at the bottom of each tube and collect the diamonds by pressing the fire button and pushing the joystick left or right. Running up and down the tubes is faster but more dangerous.

14) Chase. Work your way towards the centre of the cave without hesitating on corners.

15) Lazy Lines. Kill the bat by letting him out and running up the right hand tunnel to dislodge the skull at the top, which will fall onto the bat who will be in close pursuit.

18) Push and Drop. Push the skulls along until they are all sitting above the wall with one line of earth below them. Then blast into the box, clear a space below the wall, and drop the skulls through.

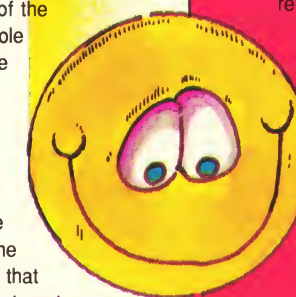
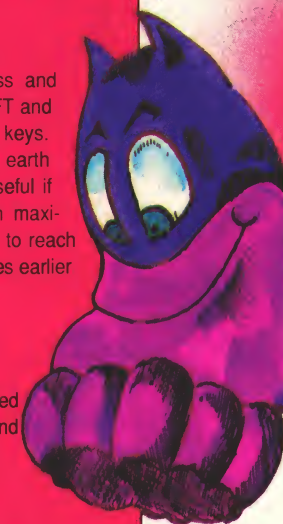
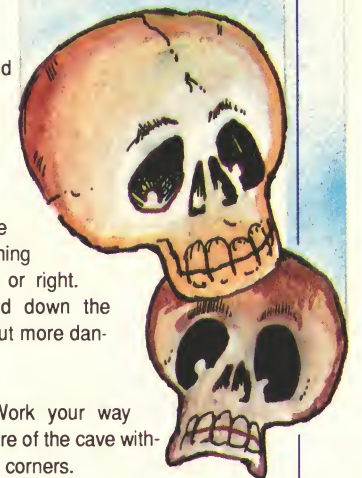
19) Drop the Lid. Drop a row of skulls on top of each cell. While the vine is growing, clear a space below without unplugging each cell, then collect

the diamonds digging from left to right – ending up near the exit box.

20) Wizard. Find out which walls are diamantiferous, and pile up the skulls before triggering the wall. At the end of this screen you should have about 15000 points.

22) Racer. Avoid the falling skull as you move down the shaft. When you have safely reached the bottom, push the skull into the cubby hole at the left hand side. The rest of this screen involves a simple but close chase back up to the top.

23) Ultimate Greed. There are hundreds of diamonds and about 5 extra life cup cakes to be had on this screen so when you tackle screen 24, you should have about 17000 points, with many spare lives in reserve.



Multiface 1

Pokes for Spectrum

SIDEWIZE Poke 36890,0 (for infinite lives)

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CHRIS WILD, Shaw, Lancashire

BUBBLE BOBBLE

Cheat for the C64

In one player mode, as soon as you've lost your last life, hit the SPACE bar before the 'Game Over' legend appears and 'Bub' will appear (he's the player two character) press player two's fire button and you'll be graced with an extra three lives. The same thing can be achieved in two player mode by pressing any fire button at the correct time.

DAVID WOOLLISCROFT, Long Eaton, Notts.



BLUE MAX

That free gift from the first issue of ACE produced this extremely useful poke; it gives you just about everything you could ever want.

Type LOAD. Then when READY appears type:
POKE 1011, 248: POKE 1012, 252: RUN
The next piece of code will load in and the READY prompt will appear again. Then type:
POKE 17925, 173 (for infinite fuel)
POKE 25584, 173 (for infinite bombs)
POKE 17438, 0 (invulnerable to flak)
Then type SYS 32768 to start the game.

JASON ALLEN, Birkenhead

IN THE ARCADES

Top tips from the coin-op front line

R-TYPE

Destroy the 8th guardian

Before attempting to destroy this final nasty you'll need a shield. On screen with the guardian are an indestructible spinning disc and several green 'babies' flying around. If you position yourself in the bottom left corner the disc and the babies will not kill you.



The disc revolves five times in a figure-of-eight pattern, then the guardian's mouth opens and spits out another disc. Move in as the mouth opens and send a plasma bolt into it – after another five disc revolutions the mouth opens again and spits out another disc. Keep firing during the revolutions and keep your ship moving clockwise in a figure-of-eight pattern. After a couple more plasma bolts the guardian evaporates and you've completed the game.

JAMES CABBETT, Weston-Super-Mare

RYGAR

The weapons, and what they do...

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3. The Tiger's Head enables you to kill monsters by jumping on their heads.
4. The Shield provides you with about 30 seconds of invulnerability.
5. The Sun allows you to kill flying monsters.
6. Shoot the red stone to turn it into a shield.
7. A scroll with a cross on it means a shield lies ahead.
8. The floating red head can be avoided by jumping it when it reaches its lowest position.

STEPHEN OTLEWELL, Derby



DOUBLE DRAGON

1. An effective method of despatching the baddies is to turn your back to them and use your elbow as much as possible.
2. Don't walk off ledges – jump off.
3. The whip will enable you to attack a baddie whilst remaining out of their range.
4. When you come to a door, wait by the left hand side and elbow the baddies as they come out.
5. Baseball bats are very useful when it comes to despatching baddies.
6. Beware the men with knives! Remember that you can pick them up and throw them back.
7. On level two – the forest – take special care when you come to the bridge; a well timed jump is needed to clear it.
8. When the baddies start falling out of the trees, headbutt them on their way down.
9. On level three – the mountain – don't get on the conveyor belt! When the green man rises up on the lift, dash in quickly and use your elbow.
10. Level four – the base – jump off the high ledge to get into the baddies hide-out.
11. Once inside, watch out for the pillars that emerge from the walls. Jump onto the first one, and keep jumping across.
12. Watch out for the moving spear, and as soon as it lunges for you, jump and keep jumping.
13. When you confront the chap with the gun, keep moving up and down the screen, it will take patience and accurate timing to finally dispose of him with flying kicks or your baseball bat. Having killed him, rush next to the temple doors and elbow the last few baddies as they come rushing out. Easy when you know how!

DEANO SCHOFIELD, Tamworth, Staffs and NEIL LEWCOCK, Hampton Hill, Middlesex.

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AUTODUEL

ST version

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To enter the poke double-click on the BASIC.PRQ file (found on your language disk). Enter the poke exactly as you see it below. Save it by typing SAVE"adpoke.bas" in direct mode. Run, and then follow the on-screen prompts.

```

10 data 3f,3c,00,01,2f,3c,ff,ff
20 data ff,ff,2f,3c,ff,ff,ff,ff
30 data 3f,3c,00,05,4e,4e,de,fc
40 data 00,0c,48,7a,00,de,3f,3c
50 data 00,09,4e,41,5c,8f,3f,3c
60 data 00,01,4e,41,54,8f,3f,3c
70 data 00,01,3f,3c,00,00,3f,3c
80 data 00,24,3f,3c,00,03,3f,3c
90 data 00,00,42,a7,2f,3c,00,02
100 data 04,00,3f,3c,00,08,4e,4e
110 data df,fc,00,00,00,14,2f,3c
120 data 00,02,04,00,3f,3c,00,09
130 data 4e,41,5c,8f,48,7a,01,18
140 data 3f,3c,00,09,4e,41,5c,8f
150 data 13,fc
160 data 00,63,00,02,04,10,13,fc
170 data 00,63,00,02,04,11,13,fc
180 data 00,63,00,02,04,12,13,fc
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690 c=&H20000:call c
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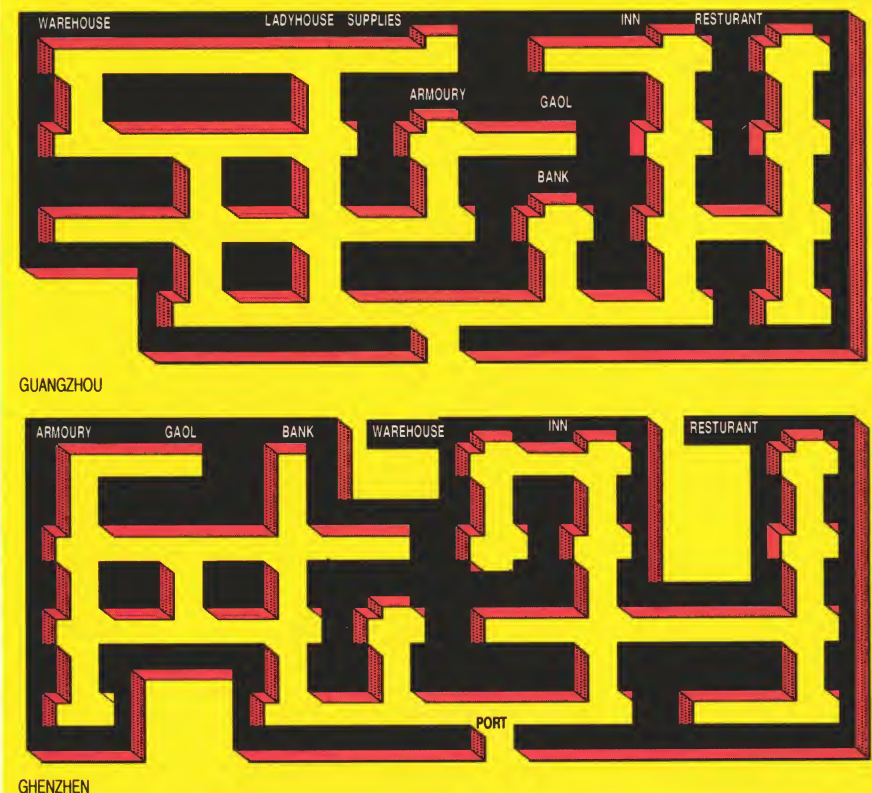
RICHARD MONTEIRO, Yeovil

TAI PAN

Maps and tips for two towns - GHENZHEN and GUANGZHOU

Guangzhou is where you start. Go to a restaurant and refuse a meal. A man will take you in to a back room and lend you \$300,000. Go to the bank and buy a ship, then buy weapons from the armoury, food from supplies and cargo from the warehouse. Don't buy the crew from the inn. Find a club and hit passers-by on the head. Your son will take them to your ship. When you have about eight crew, then go to the port and sail away. Ghenzien is the nearest port to the east of Guangzhou.

ADRIAN BETTS, Tamworth



HOT TIPS...HOT PRIZES!

It's not a question of getting something for nothing on these pages: if we print your tip, map or poke then you stand a very good chance indeed of winning the latest and best games.

This month **Al and Ric** - authors of the *Dizzy* tips - are our Tip of the Month winners. That means that they'll soon have for their Spectrum the six top-rated games in this issue of ACE: *Mercenary*, *Thundercats*, *Red L.E.D.*, *Jack the Nipper 2*, *Xecutor* and *Pro-Ski Simulator*. Not half bad, eh?

And that's not all: five other tipsters get free games for their machines. This month **Philip Kelly** will get *Thundercats* for his Spectrum. **T. Carter** will savour the pleasures of *Addictaball* on his ST. **M. Georgiades** too will be breakoutting with *Addictaball*, while **Jason Allen** and **David Wooliscraft** will both be burning rubber with *Super Sprint* for their 64s.

So don't be a nerd: send your tips in to Tricks 'n' Tactics
ACE
4, Queen Street
Bath BA1 1EJ

not forgetting to include essential info, such as your name, address and the computer you own.

Wanted

If you're floundering in a sea of indecision as to which games you should write tips for, here's a list of stuff we reckon many players are going to need help with: *Thundercats*, *Plexar*, *Hysteria*, *Super Sprint*, *Anarchy*, *Moonstrike*, *Addictaball*. Tips on these - and any other games you've got the lowdown on - will be given a very warm welcome.

Arcades...

Don't forget the coin-ops: your tips can save lives and lots of money in those coin-hungry arcades. This month's Arcade tip winner is **Deano Schofield**, whose *Double Dragon* tips earn him a copy of *Starglider* for his Spectrum +2. Next month it could be you - but only if you get thinking, writing and sending! Coin-ops like *SDI*, *Rastan Saga*, *After Burner*, *Darius*, *Road Blasters* all need tips: but don't be limited by those titles.

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Really enjoyable Breakout clone with 32 levels.

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A compilation of superb titles including Ball Blazer, Eidolon, Knight Games, Highway Encounter, and Trail Blazer. Stunning value.

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* These are new titles due for release by the time this magazine goes on sale.

THE BLITTER END...

I want an Atari!

Thousands of you do! Entries to our ST mega-competition flooded in from over 6000 users in a bid to walk away with one of the 3 ST systems on offer. Congratulations to Mr J Thompson, who carries off first prize of an Atari 520 ST-FM plus colour monitor, and to Philip Konczak and David Williams who walk away with two 520 ST-FMs plus mono monitors.



Atari competition entries by the thousand – the strain of counting them begins to tell on poor old Pete.



Runner-up Philip Konczak (right) with brother Gareth, preparing to do good deeds in the Cubs. You can tell Philip's chuffed with his prize ('I'm ecstatic!' he wrote), but Gareth isn't too upset either – he's getting Philip's cast-off Spectrum.



First prize winner Mr Thompson: 'I've never won a competition before, apart from the premium bonds at the age of 1, when my parents spent the money on nappies.' We're not exactly sure what it says on the piece of paper in the picture, but we hope it's legal.



David Williams, runner-up, a staunch Atari fan and a fireman in Congleton. 'Ataris are the only computers I have ever owned (I bought my first Atari 400 in 1980) and I wouldn't change.' The rewards of loyalty, eh, David?

Reader Survey Rewards

The following lucky readers scoop up a free software package for their machines:

J Leach, Fareham; Mark Willis, Enfield; Steven Burke, Huntingdon; Matthew Binns, Rippondon; Andrew Magnay, Cowbridge.

Many thanks to all of you who sent in the surveys – they will help us to bring you exactly the sort of magazine you want to read.

Oops²

Last month's correction of the *Impact* ACE Rating was in fact...incorrect. The correct correction would have been 955. Just goes to show that all the people can't be right all the time, and some of the people can't be right some of the time, and...er...

While we're on the subject of boobs, we'd like to point out that *Red LED* is in fact published by Starlight Software and not by Reaktor, as we stated in the review last month. Both these are Ariolasoft labels, a company that seems to have almost as many labels as products, so in this case we plead justifiable boobery.

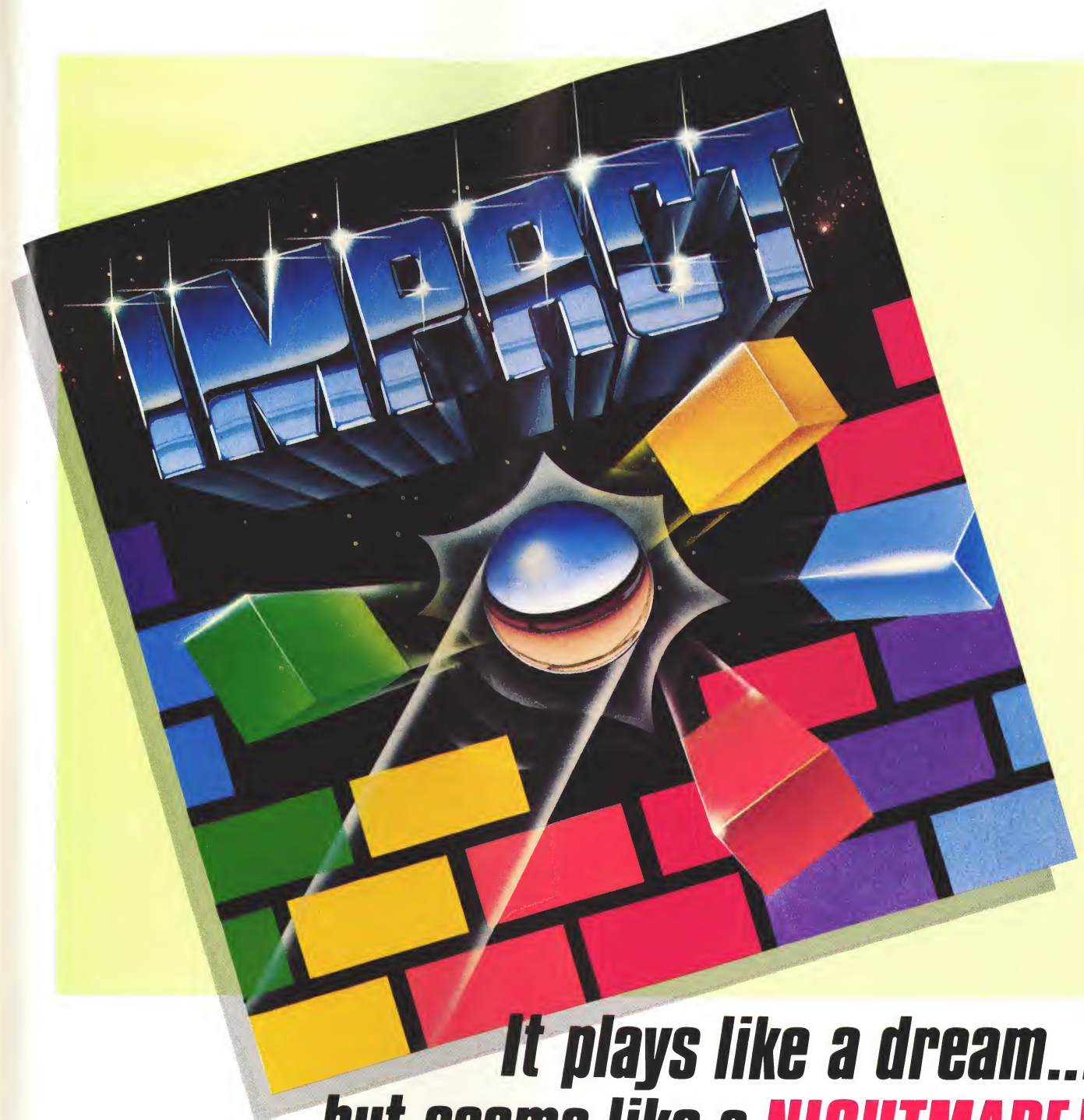
Not a joke

Just after the release of *Yes Prime Minister* ACE received a letter from NMA Communications Ltd, PR Consultants for Mosaic Publishing. The letter reads: 'Hereby find enclosed one *Yes Prime Minister* disk. This disk is intended for review purposes only. Please sign and return immediately the enclosed copy letter to NMA Communications. Should the disk not be in full working order or incompatible with your machine, do not sign this letter and return the disk to NMA.'

Naturally, ACE staff members felt this to be a grand joke to promote the game, taking the mick out of bureaucracy and red tape. We rang to congratulate NMA on their sense of humour. 'Um...er...It's not a joke, actually', replied the hapless NMA spokesperson. 'It's just our standard letter. You see, you have to return the product to us when you've finished with it.' 'But it doesn't say anything about returning it in the letter!'; 'Ah...well it should do...'...Hmm, certainly no-one could accuse NMA of not entering into the spirit of things.

Next month...

...the ACE Christmas Cracker explodes. We're playing our cards close to our chest for now, but watch out for a joint venture with Her Majesty's Armed Forces, the ACE Which Compilation? Buyers' Guide AND a special Christmas gift on the cover...Don't miss it!



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Rules on reverse of card, full details p26

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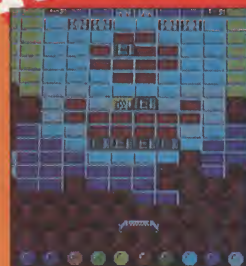
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4. The four runners up will be senders of the next four correct entries selected by the judges after the closing date.
5. All entries must be received by first post on Friday December 11th, 1987.
6. The results of the competition will be printed in the February issue of Advanced Computer Entertainment, due on sale on Thursday, January 7th.
7. The judges decision is final. No correspondence can be entered into.

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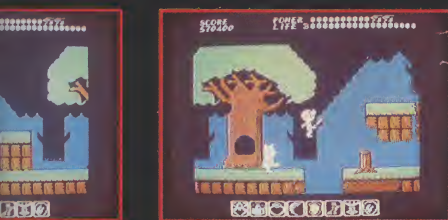
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